RAILROAD

MAGAZINE | DECEMBER 50c

Christmas Mail in 1907 at Stoop's Ferry, Pa., on the Pittsburgh & Lake Erie Railroad

THE STORY OF 4-8-4 LOCOMOTIVES

by H. L. KELSO

Electrics Into Grand Central

by SY REICH

RAILROADERS DON'T CELEBRATE

by HARRY BEDWELL

We'll train & establish you in
YOUR OWN BUSINESS
. . . even if now employed

If you've longed for the prestige and financial independence of YOUR OWN business, NOW is the time to turn this dream into reality! Here's your chance to get in on the ground floor of one of today's fastest-growing industries—the home-furnishings cleaning field. You must however be honest, diligent and able to make a small investment in a business we help you build. If needed, we'll help finance you. Business quickly established. No shop needed.

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This is a sound, lifetime business that grows from REPEAT ORDERS and customer RECOMMENDATIONS. Alert dealers can gross an hourly profit of $9.00 on own service, plus $6.60 on EACH serviceman.

You Become an Expert in Cleaning and Protecting Rugs, Carpets and Upholstery!

A Duraclean Dealership qualifies you to offer FIVE different services. Thus on some jobs you actually multiply profits.

1. Duraclean® (left) cleans by *absorption.* The absorption process utilizes a patented electric Foamovator which produces a light aerated foam. When spread onto rug fibers or upholstery fabrics, the chemicals in the foam safely and gently loosens the soil and absorbs it in a way a blotter absorbs ink. It is then held in suspension for easy removal. There's no soaking or scrubbing, thus eliminating the risk of shrinkage, color run or dry rot. This modern method revitalizes fibers, restores color tones and adds years to their life and beauty. Customers are not merely satisfied—most are so enthused they tell friends and neighbors! And they appreciate the convenience of "on location" cleaning where they can watch the care given their furnishings and use them again the same day.

2. Durashield: *soil-retarding* treatment that keeps furnishings clean MONTHS longer. So new you may be *first in town* to offer this type service. **3. Duraproof:** protects against damage by moths, carpet beetles. Backed by International 6-year Warranty. **4. Duraguard:** flame-proofing treatment which reduces fire damage. Theatres, hotels, homes offer huge potential. **5. Spotcraft:** products which enable you to handle most all spot or staining problems.

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Start Full or Part Time

No experience necessary! Some dealers establish shops or an office . . . others operate from home. Service rendered in homes, offices, hotels, or institutions. Auto dealers buy your service to revive used car upholstery. Almost every building houses a potential customer. **You enjoy big profits** on materials and labor.

Repeat and Voluntary Orders

Demonstrations win new customers. REPEAT and VOLUNTARY orders become major source of income. Customers tell friends and neighbors. Furniture and dept. stores, decorators turn over cleaning to you. We show **27 ways** to get customers.

Easy Terms!

Moderate payment establishes **your own** business—pay balance from sales. We furnish electric machines, folders, store cards and others plus **enough materials to return your TOTAL investment.** You can have your business operating in a few days!

What Dealers Say

W. Lookiebill (St. Louis): My 27th year! Began during depression and built business on good service.

D. Chilcott (N. Platte): Duraclean say gross $9.00 per hour. I gross up to $12.00. Many dealers do much better.

M. Lyons (Chgo): 2nd year should hit $100,000; 1st was $40,000. Hdqrs help makes it possible.

E. Roddey (Hampton, Va.): Did $600.00 first 12 days in January. My business keeps growing each month.

A. Wilson (Tulsa): Made $1,299 this month working alone. Duraclean outperforms all competitors.

Mail Coupon—You Get Free Booklets!

"OWN a Business" Coupon

DURACLEAN CO. 8-70D Duraclean Bldg., Deerfield, Ill.

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What Manufacturers Say

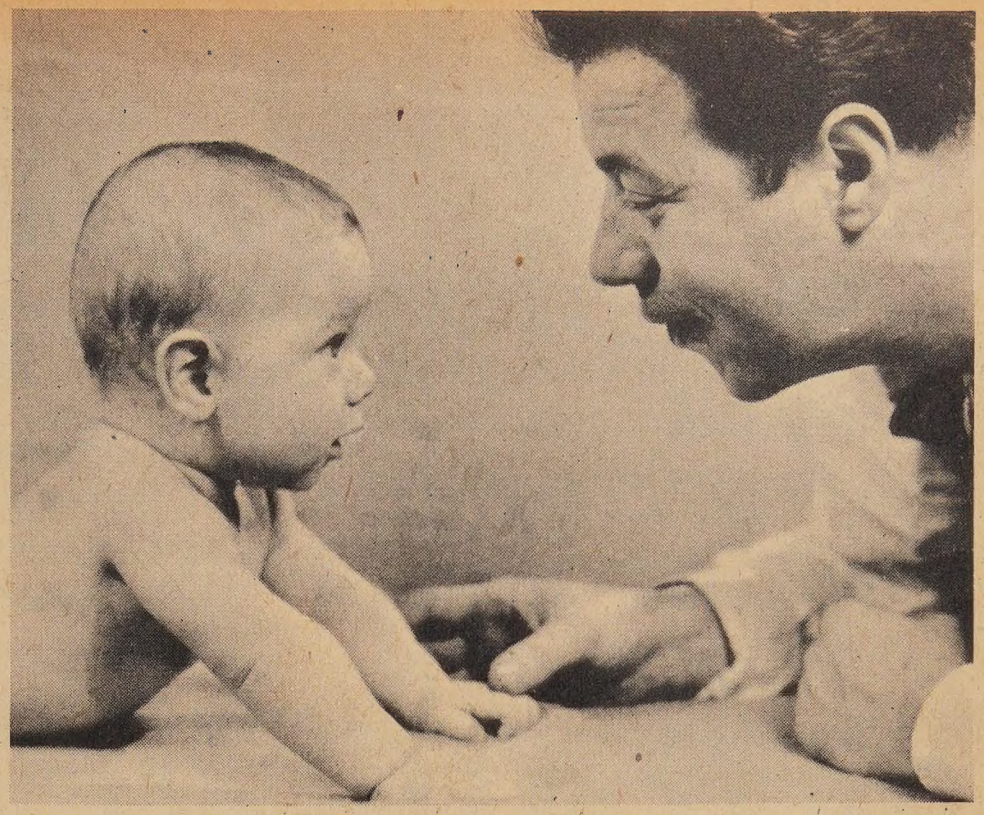
". . (Duraclean) standards in keeping with service to which . . carpets and consumer are entitled." —*Avisco (American Viscose Corp)*

". . superior to any on-location process with which I'm familiar." —*President, Modern Tufting Co.*

". . we approve this process . . in keeping with better service to Mrs. Housewife." —*Aldon Rug Mills*

DURACLEAN® CO., 8-70D Duraclean Bldg., Deerfield, Ill.

YOUR MOVE, DAD!



The first frantic months of fatherhood are over. You have time now to really enjoy the new baby—and time to really think ahead.

There's plenty to think about. And lots to plan for. What kind of a Dad will you be? What kind of a provider?

One thing's sure: now you've got to earn more money! About $500 a year more, to start with. *But how?*

Try doing what some five thousand new fathers did last year. Start preparing yourself for a better job—at home, in your spare time. *Enroll with I.C.S.*

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RAILROAD MAGAZINE

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ILLUSTRATED FEATURES

Photos of the Month 13
4-8-4 Type Locomotives ..... H. L. Kelso 18
The Life of Riley ..... Steve Maguire and A. Chandler 26
New Haven Electrification ..... Sy Reich 30

FICTION

Railroaders Don't Celebrate ..... Harry Bedwell 50

MOTIVE POWER ROSTERS

Electrics Into Grand Central Terminal 34
Lehigh & Hudson River Railway 70
Central of Georgia Railway 73

DEPARTMENTS

Mail Car ..... 6 and 66
Information Booth 36
Transit Topics 46
Along the Iron Pike 62
Books of the Rails 64
Railroad Hobby Club .. 74

The old Union Station at Colorado Springs, Colo., photographed by H. L. Kelso in 1950.

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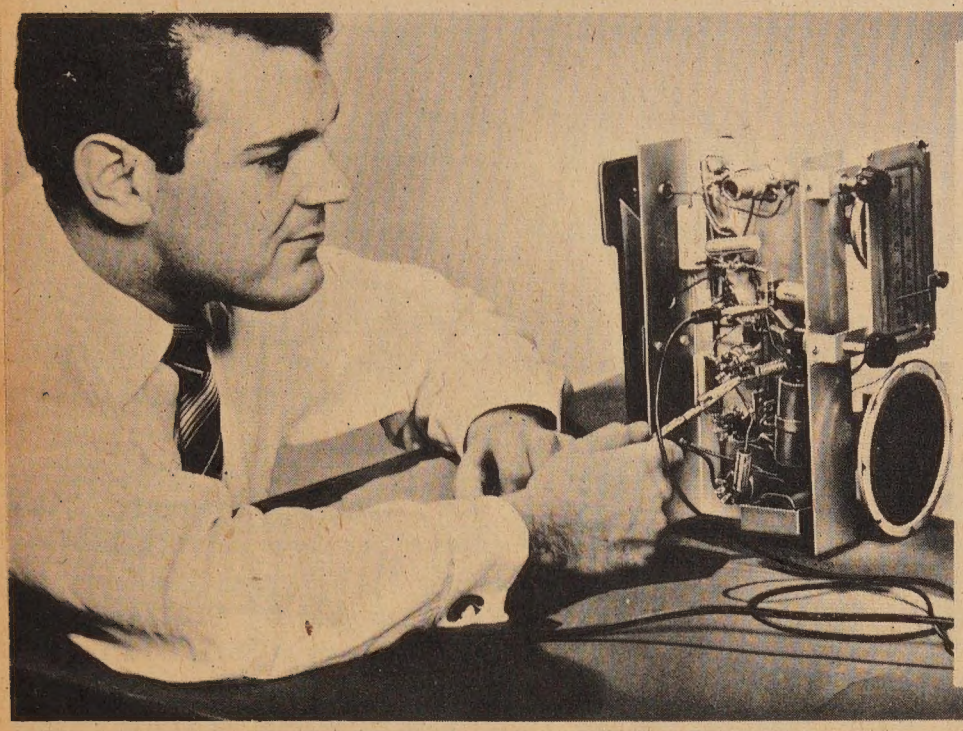

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Nothing takes the place of practical experience. That's why NRI training is Learning-by-Doing. With Servicing Course you build Radio shown at top and other equipment. With Communications Course you build Transmitters at left and other equipment. Catalog shows all equipment you get.

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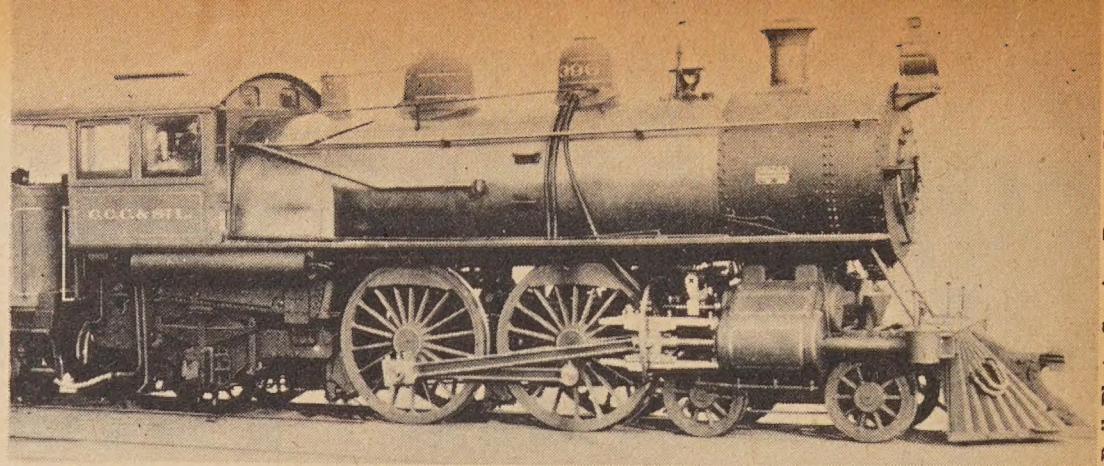

Rail Photo Service, Boston, Mass.

Big Four No. 396, a speedy Chautauqua type, predecessor of the famous Atlantics.

MAIL CAR

Readers and Fans Sit in With the Editorial Crew

KELSO'S "Atlantic Story" (Aug. issue) rolled back the years from Jeff Keenan, 6354 N.E. Cleveland Ave., Portland, Ore. "The day after Christmas, 1907," Jeff recalls, "my name was placed on the firemen's roster of the Big Four (New York Central) at Columbus, Ohio, and thereafter I fired such trains as the *20th Century Limited* and the *Knickerbocker*. Our engines were Chautauquas, predecessors of the Atlantic type, same wheel arrangement. One was No. 373, built by Brooks in 1904 and sent direct to the St. Louis World's Fair for display. With silver, gold, and nickel trim, she was truly an eye-catcher, not only at the Fair but wherever she ran afterward on the rails of the Big Four.

Jeff Keenan

"I will never forget the time I fired her for Bill Quinlan. It was Easter Sunday, March 25, 1908, and our train was the Cincinnati-New York section of the *Century* (now the *Ohio State Limited*). In those days if the *Century* arrived late at Chicago, Cincinnati, or New York the passengers were given a refund, but on that trip there was no need of refund. I did not even have to shovel down coal; We ran so fast that the swaying of the tender did it for me.

"At MX Tower near Middletown, Ohio, a southbound freight delayed us and we could not make up time until after we left Dayton Union Station. Then Bill really took the bridle off. The train dispatcher, sensing what was about to happen, alerted all operators north of Fairborn to check our speed closely. The record shows that we covered three miles from Lilly Chapel to Georgesville at 101.3 miles per hour! It was, I believe, the top speed ever made on 90-pound rails." ●

LIKE Harry Bedwell's story in this issue, our cover painting by Howard Fogg has a Yuletide motif. We see a Pittsburgh & Lake Erie mail train passing the depot at Stoop's Ferry, Pa., en route to Youngstown, Ohio, on Christmas Day, 1907. Note the wreath adorning the old gas-lamp-post just behind the baggage truck. Fireman George Higgins (later killed in an accident) leans out of his cab to wave at the station agent, A. W. Mather. The tall man waiting for a train to Pittsburgh, 12.7 miles away, was Col. James M. Schoonmaker, one of the P&LE's founders in 1879 and its operating vice president for many years.

Mr. Fogg is distinguished for the almost photographic accuracy of his railroad pictures, but this time he improved the scene by painting a beautiful church at the right instead of the boxlike house occupied by a family named Dowling that overlooked the depot in those days.

We reproduced this painting by courtesy of the artist and John W. Barriger, president of the P&LE, sometimes referred to as "America's No. 1 railfan." Mr. Barriger has the original in his large collection of railroadiana. Last year he used it on his personal Christmas card. ●

ROMANCE rode the rails the other day when a former Northern Pacific stewardess-nurse and an NP conductor were married in the observation lounge car on the Vista-Dome *North Coast Limited* where they first met.

The wedding took place just before

4 Skin Specialists' Secrets that erase

Acne Pimples Blackheads, Oily Skin

Amazing NEW combination treatment

HEALS as it HIDES

"7 DAY CLEAR"

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A big improvement first day or MONEY BACK!
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Takes only 30 seconds to use each of the miraculous 4 skin treatments in the "7 Day Clear" sample package. Think of it! All yours for only $1 if you act now!

Here's the most startling news ever published for you millions who suffer terrible embarrassment, perhaps even permanent scars from acne pimples, blackheads and oily skin. Four of the most amazingly effective skin treatments prescribed by dermatologists have been released to you in one big sample package . . . all without a prescription! Yes, now at last you can get a **complete** 4-way treatment . . . that's right — a complete 4-way treatment that is at least 75% more effective than any old hat "one way" method you may have used—hopelessly trying to rid yourself of these stubborn skin conditions! With this new 4-way combination treatment you put an end to embarrassment instantly . . . for it HEALS as it HIDES your ugly blemishes!

Most amazing of all, you don't risk one penny to PROVE the miracles this new shortcut to clearer skin will perform . . . impossible to achieve with just **one** product!

Even if you decide to keep all four of these formulas prescribed by skin doctors . . . you only pay $1 for handling charges! You must see a tremendous improvement the very first day or your dollar will be returned immediately! You must see a **clearer skin in 7 days or we pay you** . . . we'll send you a check for $2. No pharmaceutical company making a product that's sold with or without a prescription would dare make such a claim! The reasons are obvious: you just can't cover up, you just can't clear up your blemishes with **one** product! Ask any dermatologist—he'll tell you!

Here's Why We Make This Unheard Of Offer!

The truth is every man and woman in the United States has suffered with teenage trouble, at some time in his or her life! Acne pimples alone attack 80% of boys and girls to their great social embarrassment and discomfort. That's why we make this amazing limited offer to introduce you to the most trusted, the most widely accepted, the most effective 4-way treatment ever offered. We want to practically GIVE this generous medicine chest containing four wonder formulas to the first 100,000 men and women who write in . . . because we know you will be wildly enthusiastic with the results you get in as little as 7 days and you will tell others who are afflicted with these embarrassing skin conditions! In a short time, this 4-way skin regimen will be available through drug and department stores at four or five times the price you pay! So act now.

FIGHTS SKIN BLEMISHES FOUR WAYS!

The name of this truly amazing 4-way medicated treatment is called "7 Day Clear". . . it goes to work instantly to help **clear** up your blemishes while it **covers** up your blemishes . . . in as little as seven days! IT TAKES LESS THAN 30 SECONDS TO USE EACH TREATMENT! Here's what you do . . .

(1) First you use "7 Day Clear" Medicated Soap containing wonderful "colloidal sulphur" prescribed by skin specialists. It softens and dissolves dead skin cells, cleanses excess oils, purifies deep down, helps DRY UP unsightly blemishes. You'll love its rich gentle foaming lather.

(2) Second, you use amazing "7 Day Clear" Medicated Blemish Cream. It's greaseless, stainless, pleasant to use. This miraculous invisible cream contains "Allantoin" which proved effective in 108 out of 109 stubborn skin conditions tested! It "permeates the pores," soothes, heals, unplugs clogged pores, helps CLEAR UP that unsightly skin!

(3) Next, you use the astonishingly effective "7 Day Clear" Medicated Lotion. It's a bacteriostat, does away with pus-forming germs and bacteria, eliminates scaly residue, treats infected postules, closes pores . . . safeguards against spreading infection!

(4) Last, you use the incredible "7 Day Clear" Blemish Stick! This is naturally flesh colored—is impossible to detect even in glaring sunlight or under 150-watt bulbs! You "cover up" those ugly blemishes with the flick of a finger! **It HEALS as it HIDES!** And boys and men can use it without anyone discovering their secret . . . regardless of whether they are light or dark complexioned!

That's all there is to it! You can be certain the "7 Day Clear" foursome will give you the results you've always wanted! This proven Therapy helps rid you of acne pimples, blackheads, whiteheads, and other externally-caused skin blemishes FASTER, more COMPLETELY than any single remedy you've ever tried! Most important of all, it HEALS AS IT HIDES! The very first second you try this amazing combination treatment you: (1) make sure that embarrassing skin eruptions VANISH FROM SIGHT! You'll have renewed confidence, step out with the wonderful feeling that goes with a CLEAR complexion! (2) you'll know the four most effective healing formulas prescribed by dermatologists are at work "outside and deep inside" to help clear up your skin . . . in a matter of hours, days!

Get rid of blackheads and pimples . . . clear up unsightly eruptions with the miraculous "7 Day Clear" Combination treatment that "HEALS as it HIDES." **Remember, you must see a big improvement the first day or money back! You must see a clearer skin in as little as 7 days or we pay you $2.00 for filling out the coupon below!**

DRAMATIC RESULTS IN ONE DAY
OR MONEY BACK!

That's the real truth! You must actually see a big improvement in your complexion after one 24-hour treatment with the four miracle formulas available to you in the "7 Day Clear Big Sample Package" . . . offered to you at practically cost . . . only $1.00 plus 25¢ postage. What's more, you must see a clearer skin in as little as 7 days or we send you a check to reward you for your faithful use of this amazing combination skin treatment. It's results that count—not promises that can't be backed up! We know if you use "all four" of the "7 Day Clear" products—the soap, the cream, the lotion, the blemish stick . . . you'll be wildly enthusiastic with the results you get! Don't put it off! Do it now! Just send your name and address today to Healthaids, Inc., Dept. H-11 114 E. 32 St., N. Y. 16, N. Y. Hurry—this special introductory offer will be withdrawn in thirty days.

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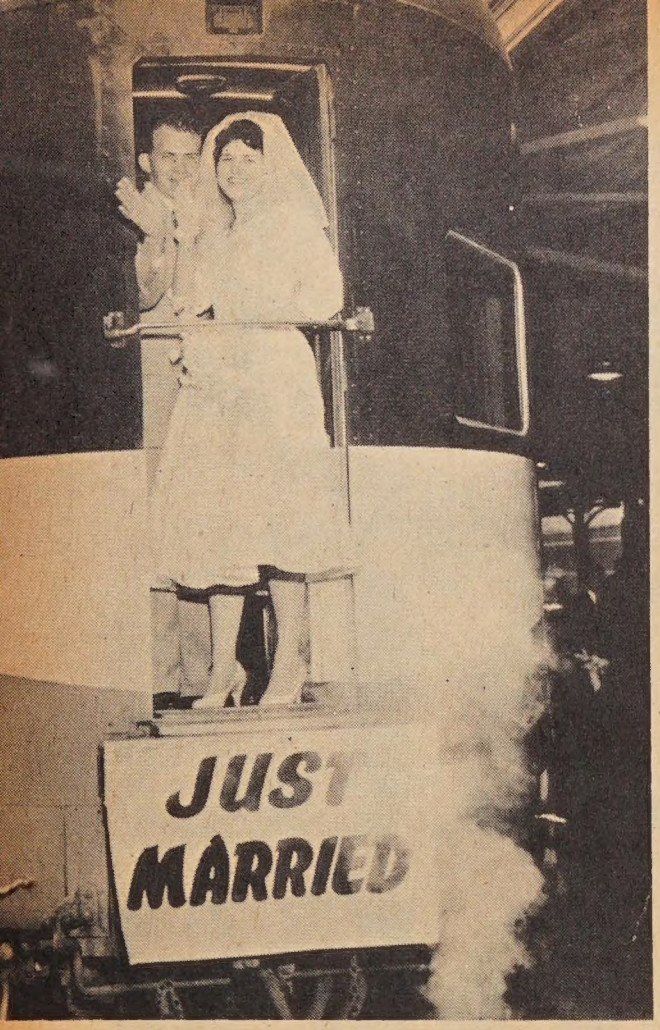

Northern Pacific employes met and were wed on *North Coast Limited*.

the streamliner left Seattle on its transcontinental run to Chicago. A reception was held in the dining car.

The bride was Miss Lorain Nygaard of Columbus, N. D., and the groom was James Claude Taylor of Auburn. The pastor of a Lutheran church officiated. At the reception a four-tiered wedding cake baked in NP's Seattle commissary was served. ●

TO LEARN when your subscription to *Railroad Magazine* expires, look at key number in upper right corner of name-and-address tag on any issue you get by mail. If it is 859, for example, your subscription ends with Aug. (8th month of 1959). If it is 259, your subscription will expire with Feb. '59 issue. Prompt renewal guards you against delay in receiving the next issue. You can save time and postage, both yours and ours, by making a note of your key number. ●

NEWS BRIEFS. Thanks, Congress, for ending that three percent tax on freight shipments, effective August 1, but the job isn't finished until you also repeal the 10 percent wartime tax on passenger fares.

Long Island Rail Road, ever alert to new ideas, has just completed arrangements with a dry-cleaner named Neil Westgate at Valley Stream, N. Y., whereby appearance-conscious commuters can pause in their dash for the morning train, deposit rumpled garments in lockers, and retrieve them, clean and pressed, on their way home that afternoon. Lockers are installed in the station for that purpose. Mr. Westgate, with a master key, picks up the soiled clothes, renovates them, and returns them to the lockers a few hours later.

Perfection of a lightweight portable "black-light" lamp to search out oil leaks in diesel locomotive fuel lines is announced by G. L. Sealey of the Reading's Signal, Electrical, and Communications department. The device, weighing only four pounds, is being used successfully to detect the presence of fuel oil in lubricating oil. It may be operated either on two batteries of the type used

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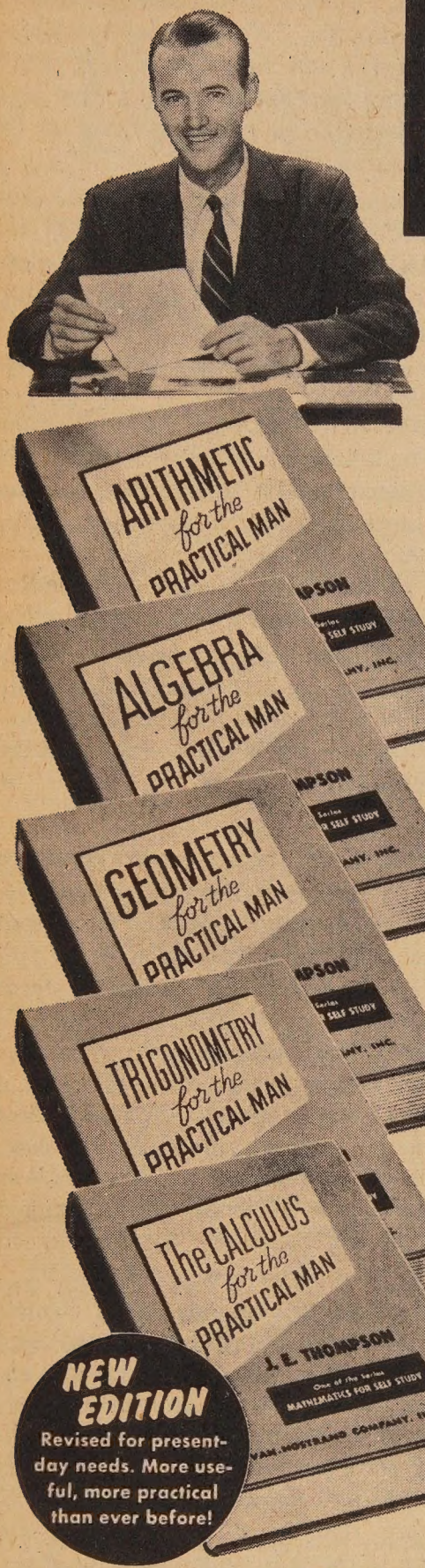
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in railroad signal equipment or with power from the locomotive itself.

Cheaper than bus travel are the Thriftrip Fares now being charged on Kansas City Southern Lines passenger trains. These lines also honor coach tickets in standard sleepers, thus offering de luxe sleeper service at coach rates. "Very few transportation companies give more for your travel dollar," comments Harold K. Vollrath, train dispatcher, 2524 Meriwether Road, Shreveport, La.

Did *you* ever visit the library of the Bureau of Railway Economics (AAR) in Washington, D. C.? Last year the library reference rooms were used by a total of 591 editors, authors, and other researchers for periods ranging from one day to several weeks each.

The longest passenger train ever operated in Canada consisted of 26 Canadian National passenger cars pulled by three diesel units and carrying 964 passengers who had disembarked from the liner *Asturnia* at Halifax, Nova Scotia, last May 7. The previous record was set April 15 when a 24-car diesel-powered CNR train handled 761 passengers from the liner *Olympia.* Up to that time the number of cars in Canadian passenger trains was limited to 15 in wintertime and 18 in summertime.

The following verse was written on the wall of switch shanty at Boyles, Ala.:

Uphill slow, downhill fast;
Tonnage first, safety last. ●

FIGURES issued by the Association of American Railroads show that rail journeys in 1957 were nearly twice as safe as travel by bus or domestic airlines and about 37 times as safe as riding private automobiles or taxis. This data comes from the ICC, Civil Aeronautics Board, and National Safety Council.

Fatalities in automobile accidents last year totaled 25,700 as against 70 for buses, 31 for air carriers, and 17 for railroads. Putting it on a mileage basis, a passenger could travel 1,524 million miles by rail without being involved in a fatal accident, but only 847 million miles by domestic air carrier, 730 million by bus, or 39 million by automobile. ●

90 MILES AN HOUR. The following comes from James M. Grigg, 5951 S. Tripp Ave., Chicago, Ill.:

"As to the Burlington's 590, Columbia type, I as a farm boy was thrilled in 1899 by an article in McClure's magazine entitled 'At 90 Miles an Hour,' written by Cleveland Moffett, featuring the 590 and engineer Frank Bullard. I still have that article, which I saved then, little thinking that in a few years I'd be pounding brass on the Burlington.

"Over 40 years later, on power construction, I worked with and won the friendship of a big fellow who had been a telegraph lineman in the day of Bullard's fame. He told me of having been put out by a fast mail engineer named Bullard, who, contrary to custom, had refused to let him off at the break which he had been sent to find and fix. He explained that the need for the wire was so great that, after Bullard stopped for water at Mendota, an engine was cut off another train to carry the lineman back to the break.

"Evidently Bullard 'owned the road,' for in that day a lineman had authority to ride any engine and, when an important wire was down, to command the engineer to let him off." ●

YOU CAN see it from the Southern Pacific track near Beowawe, Nevada: a litle mound marked by twisted sagebrush and a wooden cross 20 feet tall, painted white and bearing the words *Lucinda Duncan* and *The Maiden's Grave.* This teen-ager's story has become a legend. Lucinda was riding a covered-wagon on the Overland Trail about a century ago when she died, probably of disease, as thousands of pioneers did. Sadly the wagons creaked on toward California, leaving her to sleep out eternity alone in the desert.

Railroaders building the Central Pacific (now SP) discovered the spot in 1869. They cleaned the area and enclosed it with a white picket fence. Thereafter section gangs kept the solitary grave neat and trim. In 1906, when the SP was rerouted, they moved Lucinda's remains further up a gentle slope so the rails would not cross them, and in 1950 replaced the old cross with a larger one. ●

CONTRADICTING a caption in our August issue, Stan Kistler, 921 N. Lake Ave., Pasadena, Calif., says No. 1468 was *not* the last 4-4-2 type operated by the Santa Fe on the West Coast.

"After pulling Los Angeles-San Ber-

(Continued on page 66)

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Special Note to those who handle a good deal of money

If you are a bank teller, cashier, storekeeper, ticket-seller, etc., you handle many coins daily. A percentage of them probably have Extra Value! Learn what coins are valuable! Learn to spot and recognize them. You may find and earn extra dollars—possibly a fortune—if you keep your eyes open!

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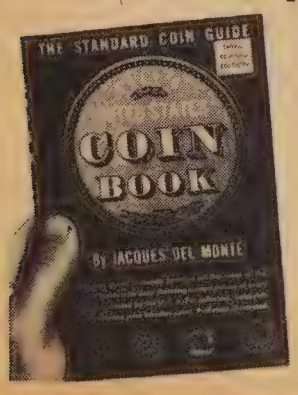

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A recent editorial in the Clarence (Missouri) COURIER

Have you ever stopped to think how much railroad mail service costs? If not, you're in for a surprise! The railroads get only one-eighth of one cent for carrying a first-class letter an average of 500 miles. That's a small per cent in the dollars and cents column. Then, for around one-eighth of one cent more, the railroads provide the hundreds of mail cars in which mail is sorted enroute, plus the services of thousands of their own employees who sort, load and unload sacked mail, plus the use of all manner of necessary facilities, platforms, conveyor belts and chutes, switching and terminal services, and so on.

The Post Office Department is responsible for the mails, but the railroads are the organization that really moves the mail, and they are a tax-paying organization.

Every community in the United States is served by railway service. The entire population is served by the railroads directly or indirectly.

The American people are quick to yell if mail service is poor, but just consider the plight of the railroads. They only get one-quarter of a cent to move your first-class letter anywhere in the U. S. or Canada. That is a bargain these days; you couldn't find another like it anywhere.

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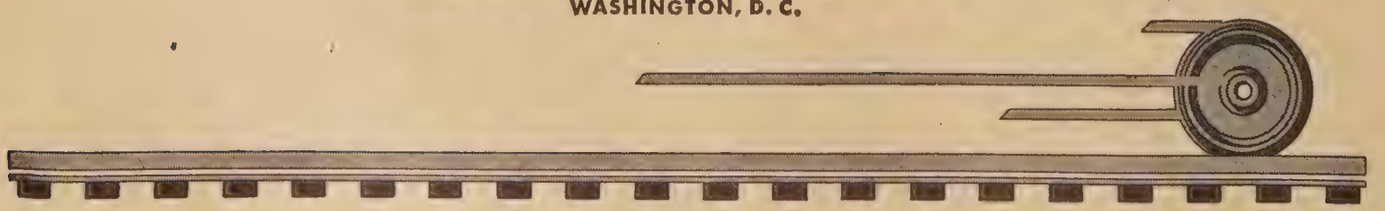


Photos of the Month

Southern Pacific Lines

California earthquake of April 18, 1906, curved this Southern Pacific track and brought two tunnels closer together.

Steam power today: Nickel Plate 2-8-4, coaling up, flattens her smoke plume against coal tower at Conneaut, Ohio.

July 24, 1957: A Canadian National freight pickup at Tara, Ontario. The small Mogul engine was No. 86, Class E-10-a.

Two mighty warriors, Santa Fe type No. 1675 and Northern type No. 3758, with thundering exhausts, wheeled the Santa Fe's famous *Grand Canyon Limited* through Cajon Pass.
H. Sullivan

Burlington locomotive No. 111 is winding its way through Sheep Canyon in Wyoming alongside the Big Horn River with a long string of oil tankers.

Burlington Lines

THE 4-8-4

Most Famous of All the Northen-Type Steamers Was the Northern Pacific's 2626, Originally the Timken Roller Bearing Company's No. 1111, Which Set the Pace for a Triumphant Parade of 4-8-4's

by H. L. KELSO

THERE'S a legend to the effect that many years ago an unreconstructed old hogger on a southern road, proud of his family's service record in the Confederate Army, balked at taking out a freight train with a Great Northern boxcar in the consist. It seems he didn't like to see the word *Great* coupled with *Northern,* even on a boxcar.

The story may be a myth. We know, however, that when the Gulf, Mobile & Ohio introduced a streamliner into the Deep South it called this train *The Rebel.* Loyal Daughters of the Confederacy protested on the ground that the South had "seceded," not "rebelled." Years passed. Other *Rebel* trains were added. Then GM&O took over the Alton and we heard some amusing speculation as to what would happen if *Rebels* met the Alton's *Abraham Lincoln* running on the same system.

This slight undercurrent of feeling may explain why the old Nashville, Chattanooga & St. Louis (now Louisville & Nashville) tagged the name *Dixie* onto its big, semi-streamlined, 4-8-4-type locomotives in 1943 when they first hit the shining steel rails. Most of the other roads which used 4-8-4's—but not the southern Richmond, Fredericksburg & Potomac—dubbed them the *Northern* type. The RF&P preferred the name *General,* or even *Governor,* to describe its 4-8-4's.

Looking through the RF&P steam roster, you find five handsome 4-8-4's named for Confederate heroes. No. 551 was the *General Robert E. Lee,* No. 552 the *General T. J. Jackson,* No. 553 the *General J. E. B. Stuart,* No. 554 the *General A. P. Hill,* and No. 555 the *General J. E. Johnston.*

Getting back for a moment to the NC&StL, we note that engine crews gave their own pet names to 4-8-4's, such as *Yellowjackets* and *Big Stripes,* because of the paint scheme. A yellow stripe blazed along the running board to the rear of the tender. Apparently the designation *Northern,* which was accepted in most railroad circles, was a naughty word on the Dixie Line. The NC&StL's first 4-8-4's, bought in 1930, were called *Gliders.* Incidentally, the 1943 Yellowjackets were the last steam locomotives to go into service on that line.

Although the term *Northern* was

Steam-operated model of Union Pacific 4-8-4, scale ¾ in. to ft., built by Al Roedding, Rte. 1, Weston, Ontario, Canada, in about 10,000 hours. Length overall 85½ inches, drivers 5¼ inches, boiler pressure 100 lbs., can pull ton.

most widely used, the 4-8-4's had more secondary names than any other locomotive type. On the New York Central they were called *Niagaras;* on the Lackawanna, *Poconos,* and on the Chesapeake & Ohio, *Greenbriers.* The Lehigh Valley called them *Wyomings.* The Southern Pacific listed them as Class GS (General Service), better known as *Daylights.* In Canada and Spain they were *Confederations.*

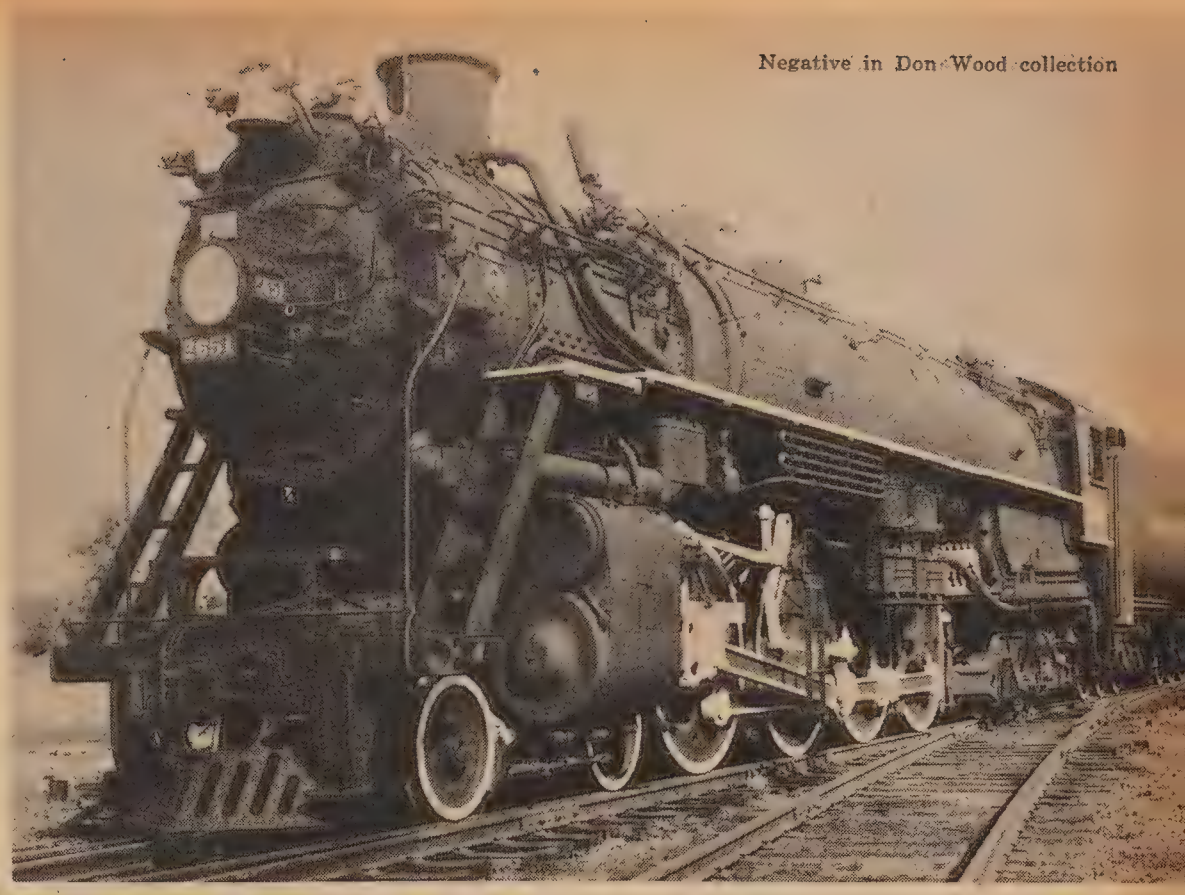
As you probably know, the 4-8-4 is an engine with a four-wheel leading truck, eight coupled driving wheels, and a four-wheel trailing truck directly under the firebox. The first 4-8-4 went into service in 1926 and, in part, satisfied the perennial demand for bigger and more efficient power—power that would go farther and faster with more tonnage at a lesser cost per ton-mile.

Thus, when designers for the Northern Pacific and the American Locomotive Company collaborated to bring out the world's first 4-8-4, a new and mighty type was born. Before steam ended on the NP a total of 90 Northerns were hauling freight and passengers between St. Paul and Seattle.

PERHAPS the most famous 4-8-4 —certainly the most photographed one—was the NP's 2626, originally Timken Roller Bearing Company's 1111. Alco built her at Timken's expense in 1930 to demonstrate the efficiency of roller-bearings on a steam locomotive.

This mighty machine started a series of test runs over thirteen railroads, and on January 4, 1932, while in NP service, she completed a total of 100,000 miles. During the 21-month period she handled 227 passenger and 328 freight trains on regularly scheduled runs over roads extending from the Atlantic to the Pacific.

Beginning the test runs April 15,



Negative in Don Wood collection

First 4-8-4: Baldwin built 10, with roller-bearings, for Northern Pacific.

(Below) NYC train, Niagara type engine, at La Salle St. Station, Chicago.

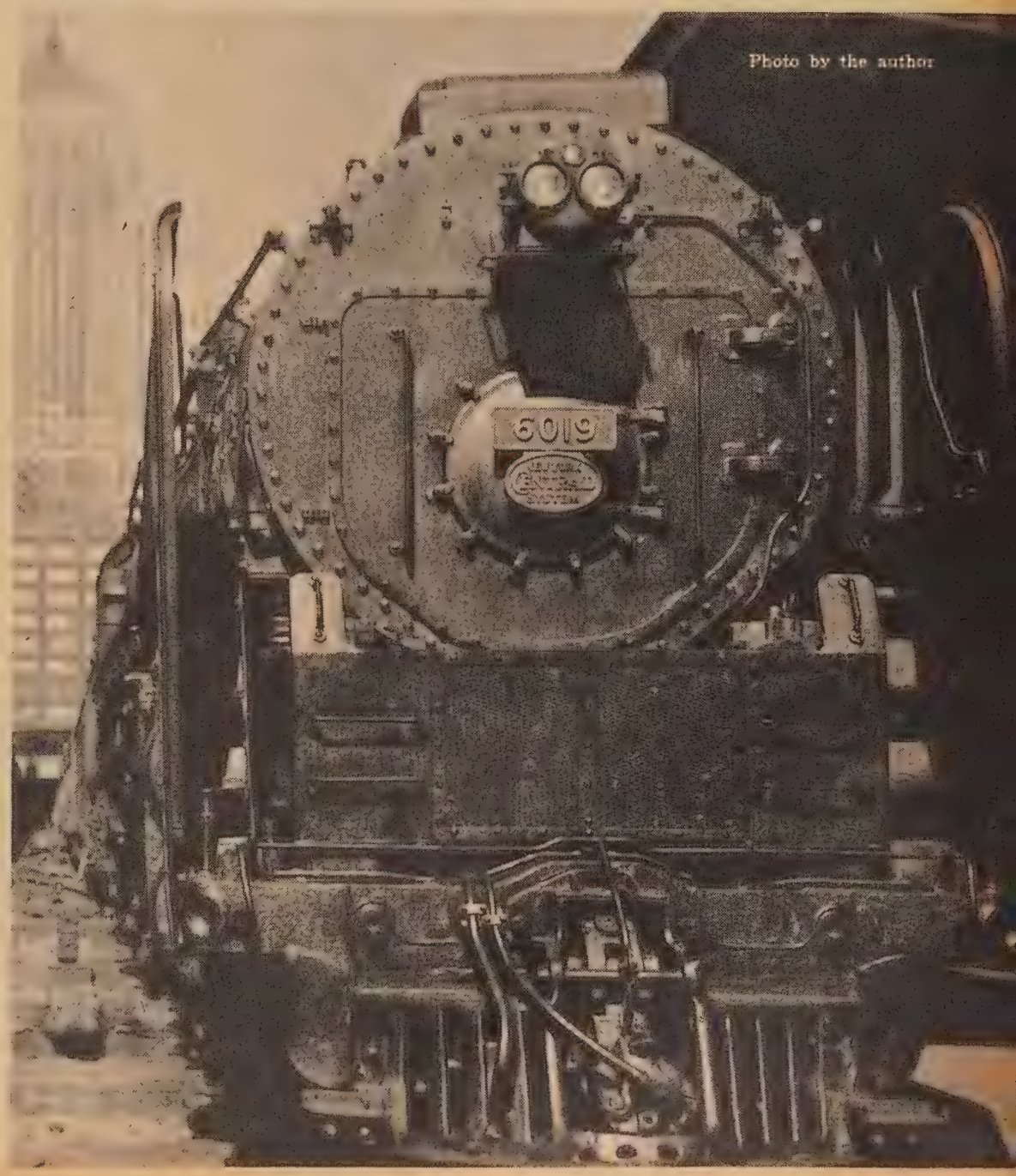


Photo by the author

1930, on the New York Central, she chalked up 44 freight runs totalling 6,582 miles, average freight-train speed being 28 miles per hour. Trains of 125 cars with a consist of 6,283 tons were handled with ease. Oddly, the Central made no passenger test run with her.

The triumphant 1111 was then switched to the Pennsy for 45 freight and 23 passenger runs. The maximum number of freight cars handled at a time on this road was 148; the maximum tonnage on any one train, 8,625.

In passenger service the easy-rolling conqueror wheeled a dozen cars over the Allegheny Mountains unassisted, and while handling the *New Yorker* eastbound between Chicago and Crestline, Ohio, she averaged 61 mph in a breeze.

However, the Pennsy never built or owned a standard 4-8-4, the discovery of which fact amazed us. The road did have many 4-8-2's and numerous passenger engines with eight drivers, but the latter were four-cylinder machines, not eight-coupled in standard fashion. It is also on record that the Pennsy tested a Norfolk & Western 4-8-4 on its own road and there were times when it borrowed 4-8-4's from the Reading to wheel its freight.

We don't know why the Pennsy refused to add any 4-8-4's to its great stable of iron horses. The same applies to the Erie, the Nickel Plate, and the New Haven, on all of which roads the 1111 made successful test runs. She handled the New Haven's *Merchants' Limited* on a round trip, but while she performed well, top interest in the run centered around the fact that it was the first all-roller-bearing train operated in America. Its locomotive, tender, and fourteen cars were so equipped.

Other important roads that never had 4-8-4's on their rosters were the Southern, the Seaboard, the L&N, the Illinois Central, and the Baltimore & Ohio. Rather than build or buy a standard 4-8-4, the B&O, like the Pennsy, experimented with a four-cylinder type known as a 4-4-4-4. This wheel arrangement allowed for the application of lighter main and side rods, thus reducing the dynamic augment or pound on the rails as the drivers rotated. The B&O engine was built in 1937 and remained in service until 1950. During her lifetime she posed severe maintenance problems and, generally speaking, may be considered a failure. The same is said of the Pennsy 4-4-4-4.

The B&O also designed, but never built, a radical 4-8-4 (actually a 4-2-2-2-2-4) that employed the use of Bessler engines on each set of drivers, thereby eliminating the need for side rods. This design came too late. By the time the new type was ready for building, the diesel's efficiency had become so established that the B&O gave up plans for new steam locomotives. As a matter of record, we point out that the Timken 4-8-4 was never tested on B&O rails.

Another 4-8-4 calculated to revolutionize steam power was the New York Central's No. 800, a multi-pressure, three-cylinder compound that Alco built in 1931. This innovation, weighing 435,000 pounds, with 69-inch drivers, carried a huge boiler pressure of 300 pounds. As for steam distribution, she approximated a German locomotive designed in 1925 by Schmidt-Henschell.

Despite her complexity, No. 800 did fairly well in hauling freight west of Buffalo, but nothing in her performance indicated she would ever become *the* locomotive of the future. Aside from her high maintenanec costs, which nobody liked, her crews feared she might explode at any time and send them to glory. Finally, in 1939, which was not too soon, she was dismantled, nothing but her tender surviving the noble experiment.

AS LATE as 1949 the Lima Locomotive Works, which had built some of the world's most famous engines, was advertising that steam power still rated serious consideration. They had just designed a 4-8-6 that they hoped would outperform any 4-8-4 on the rails. Her six-wheel trailer truck was to support a firebox of 133 square feet, while the total engine weight would be almost 525,000 pounds, with a tractive effort of 87,000 pounds, including a booster good for operation up to 35 mph. Here again, due to the diesel, the design died a-borning.

Even so, this great company contributed much to 4-8-4 history. Perhaps the finest of all Lima locomotives were the durable and beautiful Southern Pacific streamlined Class GS 4-8-4's, to which we will refer later. Although more famous for their Berkshire type (2-8-4) superpower engines, Lima turned out some very efficient 4-8-4's.

Among these were the Grand Trunk Western (Canadian National) semi-streamliners used in fast passenger service between Chicago and Port Huron. Their average monthly mileage was about 10,000, the average train-length 15 cars. From the

Builder's photo of a Lehigh Valley 4-8-4 at Baldwin plant, Eddystone, Pa.

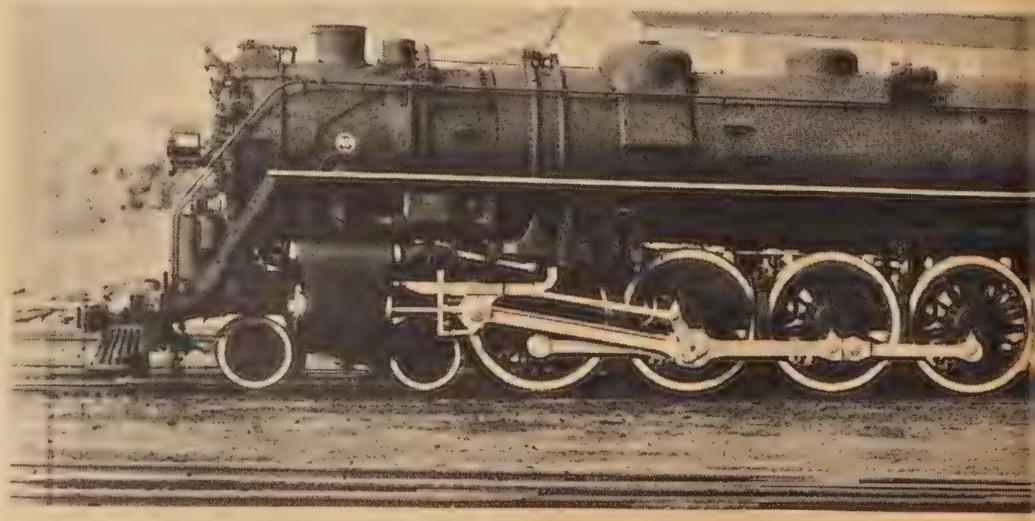


Photo by the author

World's heaviest 4-8-4 type: No. 2903 of the Atchison, Topeko & Santa Fe Railway, shown with *The Chief* eleven years ago.

time these speedsters were put into service, until the first changing of the driving tires for wear, they averaged 200,000 miles, which the GTW considered excellent.

Other Lima 4-8-4's include four built for the Wisconsin Central (Soo Line) and eight for the Central of Georgia, which might be called unique because they were equipped with eight-wheel tenders carrying only 13,000 gallons of water but a giant pile of coal, twenty-one tons!

Contrast these tenders with those tied onto twelve huge 4-8-4's that the Atlantic Coast Line put into service in 1938. Each ACL tender bore a mountain of coal (27 tons) and 24,000 gallons of water. These big Baldwins are now gone but not forgotten. In their day they provided the Seaboard's diesels with some real competition on crack trains running between New York and Florida. Any one of them could handle more than twenty standard steel cars at better than 70 mph, mile after mile. The dozen engines bore the dubious distinction of being the last steam power bought by the ACL.

In 1935, Lima built five 4-8-4's for the Chesapeake & Ohio's main-line passenger runs between Charlottesville, Va., and Hinton, W. Va. They wheeled such trains as the *George Washington*, the *Sportsman*, and the *F.F.V.* over three ranges of the Alleghenies, with maximum grades of 1.52 percent, and proved so successful that C&O ordered more of the type from Lima. Known as Greenbriers, they weighed 504,000 pounds, and had 72-inch drivers and a rated tractive effort of 82,700 pounds with booster.

The mention of Hinton, a C&O division point at the confluence of the Greenbrier and the New rivers, recalls the hill-billy song, *New River Train*, recorded in the early 1920's. The song tells of a West Virginian mountaineer who sickened of his native hills because his girl turned

As usual, her wheels were painted white for the engine's official portrait.

Negative in Don Wood collection

H. W. Pontin, Rail Photo Service, Boston, Mass.

Great Northern's 2585, a mighty 4-8-4 type, wheels a heavy passenger train over the high Gassman Ravine bridge, four miles west of Minot, N. D. (1948)

him down. He forsook Hinton, leaving on a train that rolled westward through the New River Valley. Lovers of hill-billy music who have not heard this lament should scout the various record shops, near and far, for a copy of it.

Incidentally, folk and hill-billy songs, especially those with a railroad background, give your author much listening pleasure and act as a solace for the fact that he is no longer employed as a locomotive fireman, as he was years ago.

GETTING back to 4-8-4's, we will always remember the thrilling sight of the red, orange, and silver *Daylight,* powered by a streamlined Northern type in matching colors, blasting out of San Luis Obispo to battle the towering Santa Margarita Mountains. Perhaps you have ridden this train and recall that, up ahead, the powerful 4-8-4 sang a breathless chant, broken at intervals by the low, long moan of its euphonious chime whistle.

In her sunset days, the SP's most celebrated 4-8-4, No. 4459, developed a terrific shimmy upon reaching 75 mph when pulling the *San Joaquin Daylight* between Bakersfield and Fresno. Although she was taken down and overhauled again and again, no one discovered the cause of this aberration.

No. 4459 was equipped with SKF bearings which, along with Hyatt roller-bearings, has long competed successfully with Timken. You may recall that No. 4459 was one of the many 4-8-4 locomotives that turned in more than a million miles of service. She was truly great.

If you have never seen a *Daylight* 4-8-4 you owe it to yourself to take a long and lingering look at the cover of August, '58, *Railroad Magazine.* Elizabeth Tone brought this beautiful engine to life. Just add a string of cars painted in matching colors and you have, in your mind's eye, an impressive picture of the *Coast Daylight,* or its counterpart, the *San Joaquin Daylight.* You can heighten your enjoyment if, at the same time, you play the new hi-fi record, *Memories in Steam* (reviewed in this issue), which reproduces the unforgettable sounds of *Daylight* engines speeding over the rails.

The year 1927 found the Canadian National, the Lackawanna, and the Santa Fe pressing the Northern Pacific for the honor of bringing out the world's first 4-8-4. The CNR, whose 4-8-4's are *Confederations,* was by far the top exponent of this type, having a total of 203 such locomotives on its all-time roster.

The Santa Fe acquired its first 4-8-4, No. 3751, from Baldwin in 1927. She rated a monstrous tractive effort of 69,150 pounds. The second such engine, No. 3752, also Baldwin-built, went into Santa Fe service in 1928. After 19 years of operation as originally built, she was rebuilt in 1947 with Franklin poppet valves and from time to time served as a guinea pig for certain refinements.

In 1937 the Santa Fe ordered some much improved 4-8-4's from Baldwin and, thanks to Timken No. 1111, they boasted roller bearings on all engine and tender axles. The boiler pressure was 310 pounds per square inch, which was considerable.

REVERTING to the demand for more efficient locomotives to handle heavier trains on faster schedules, we go back to the year 1930 and the Baldwin advertisement regarding the 4-8-4 delivered that year to the Lehigh Valley. The new engine was tested in fast freight on the Seneca Division, and in comparison with the Mikado (2-8-2) type employed in similar work, demonstrated her ability to handle a train load heavier by 500 tons while saving 20 minutes in running time.

The record shows that she saved 25 tons of coal per thousand ton-miles and returned 38 percent on the investment. Thus the Lehigh Valley's outlay in 1931 of $2,340,000 for 4-8-4's brought a direct saving of $900,000 a year. This road, ever conservative, asked Baldwin and Alco to design a 4-8-4 that would meet their needs with regard to weights, clearances, and certain equipment details.

One engine from each plant was tested. The performance of both was so satisfactory that ten engines were ordered from each builder. An unusual feature of the first batch, used mainly on freight, was the absence of a pilot, the front end having footboards like yard goats. Another feature was the use of a Bethlehem auxiliary locomotive under the tender which resulted in an increased tractive effort of 10,000 to 18,000 pounds.

But the Valley engines, known as Wyomings, were forerunners of big-

ger and more efficient 4-8-4's that would go into service on many roads. In 1937 the Milwaukee Road receipted for thirty Baldwins, and locomotive operating costs dropped at once. Fifty-five 2-8-2's (Mikados) were released to other divisions, 17 older engines were scrapped, and 54 of various types were placed in reserve.

A case where serious defects in 4-8-4's, due to a choice of metals, posed serious maintenance problems. We refer to the 35 Northerns which went into service on the Chicago & Northwestern in 1929. Operating costs rose to an alarming 80 cents per mile and threatened to go even higher. Officials faced the choice of either scrapping or completely rebuilding the engines. The latter was decided upon. When the patients came out of the backshops equipped with Timken bearings, Boxpok drivers, and so on, they went back into service with unusual efficiency. Operating costs dropped to less than 25 cents per mile. Within three years they had more than repaid the rebuilding cost. One engine, No. 3004, ran better than 450,000 miles before she again needed shopping.

If space permitted, we could describe the 4-8-4s built by the roads themselves. Were there ever finer or more efficient Northerns than those built by the Cotton Belt in its Pine Bluffs shops? Consider, too, the Frisco's three giants that emerged from their shops at Springfield, Mo. Many motive-power men consider the homespun Northerns on the Burlington Route, built at their West Burlington shops, as the finest examples of Frisco steam power.

Well remembered is the "Q's" poppet-valved No. 5625, once queen of all the road's 4-8-4's. Pages could

Don Wood, 29 Mt. Haven Drive, Livingston, N. J.

Northern type, No. 2113, leased from the Reading Co., is shown on her way to Enola, Pa., with Pennsylvania Railroad freight.

be written about the tests and trials of "poppet-ized" Northerns, including the New York Central's No. 5500, sole *Niagara* to be so equipped on the Central system.

SOME roads, realizing the value of the 4-8-4, rebuilt older engines of other wheel arrangements into fast and flossy Northerns. Take, for example, the Reading's rebuilding of 30 old Consolidations (2-8-0's) into modern and beautiful Northerns.

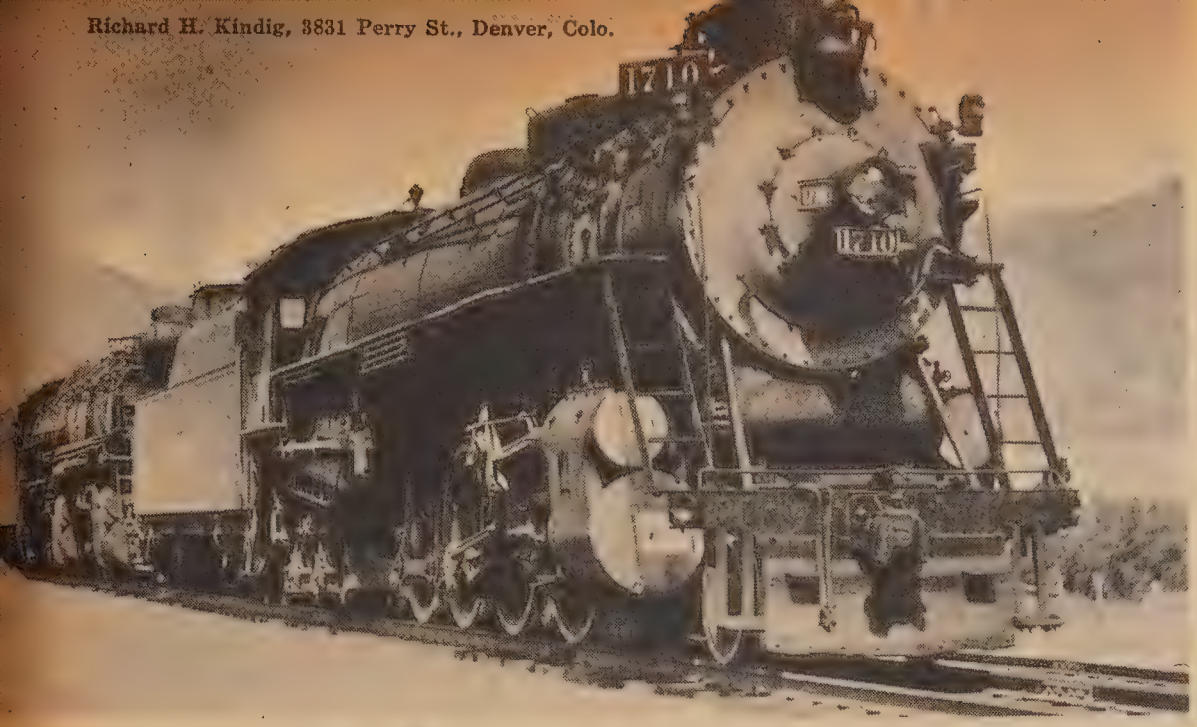
Other notable rebuilding jobs had to do with the Missouri Pacific's 25 Class 2100 4-8-4's that originally had come to the road as Berkshires (2-8-4's). The Berkshire is a fine engine type, but the MP versions with 63-inch drivers were suitable for freight only. The road really needed versatile engines suited for passenger or freight. Thus when the rebuilds emerged from the Sedalia shops as 4-8-4's with 75-inch drivers, the MP had some excellent general service, dual-purpose machines. Going into service between Kansas City and Pueblo, the 2100's stacked up speed and economy records that brought joy to Missouri Pacific officials and crews.

Later came the great 2200 Class Northerns from Baldwin and which topped the scales at 489,000 pounds, without tender. Their records on 125-car freights and in passenger service on the road's *Sunshine Limited, Texan,* and *Hot Springs Special* reflect credit on everyone concerned. All of the engines were equipped with roller bearings, so we see again what a great part No. 1111 played in steam history.

Our story would not be complete without further mention of the Norfolk & Western. This road, which built its own engines, has the distinction of turning out the most powerful Northerns ever known. There were fourteen of them, each weighing 494,000 pounds without tender. They first appeared on the road in 1941. Their comparatively

Rail Photo Service, 93 Massachusetts Ave., Boston, Mass.

Ed Street was standing on the roof of Glen engine house at Montreal in 1952 when he photographed this 4-8-4, Class K-1a, just in from St. John, New Brunswick. The only other CPR engine in her class was No. 3101. Both were built in 1928.



Richard H. Kindig, 3831 Perry St., Denver, Colo.

Denver, Rio Grande & Western engines 1710 (4-8-4) and 3606 (2-8-8-2) double-headed 84 cars of fast freight through Gypsum, Colorado, in the year 1940.

small drivers, 70-inch, coupled with a boiler pressure of 300 pounds, gave them a tractive effort rating of 80,000 pounds, which made them standouts in their field.

These engines were widely known for their astounding records in speed, economy, and durability. Despite their small drivers, they were very fast. Donald Steffee's 1957 speed tabulations in *Trains* magazine listed them along the year's "hottest" speed runs. In fact, the engines which until a few weeks ago powered the *Powhatan Arrow* were the last steamers left in America that average better than 60 mph on long stretches.

Turn now to the Southern Pacific, whose 4-8-4 history dates back to 1930. The SP's first ten 4-8-4's, built by Baldwin along conventional lines (non-streamlined) were hard to keep on the rails. Careful study by the SP inspectors showed that Baldwin had inadvertently applied part of the trailing trucks under the firebox in a reversed position.

Once corrected, the engines ran so well that the SP decided to get some finer and faster Northerns. George McCormick and Frank E. Russell, the road's top motive power heads, planned for the great and gaudily painted streamliners that have created history. If you have a yen for these 4-8-4's you should read Railway & Locomotive Historical Society's *Bulletin* 94, in which David L. Joslyn deals authortatively with SP locomotives. The first SP Northern to be dismantled was No. 4414, in the fall of 1954.

THE UNION PACIFIC had 45 handsome and efficient 4-8-4's which more than earned their keep over twenty years.

Glowing accounts could be told of the 4-8-4's in Spain, in France, in Australia, in New Zealand, and even in Russia—countries in which the diesel is still not supreme. When the last operative steamer in America is set out on the scrap track your author will be among the first to head for foreign lands to get another sight of Northerns in action.

Imagine, if you can, a steam locomotive less than ten years old ignominiously put to the torch! Such a thing happened to a fleet of 4-8-4's that had gone into service on the Western Maryland in 1947! No event that I know of brings out the supreme efficiency of the diesel locomotive more forcibly.

Today, most of the mighty 4-8-4's have been reduced to scrap-iron, victims of an era in which some inventions become obsolete even before they leave the drafting board. The diesel damned the steamer to premature death.

Their fires of most steamers have been drawn for the last time. The needle on their gages has dropped backward and downward. With the dying, lazy hiss of steam from their cylinders, the silence of death has settled down. Experts predict that the year 1962 will see the end of the once-famous iron horse on the common-carrier roads of North America.

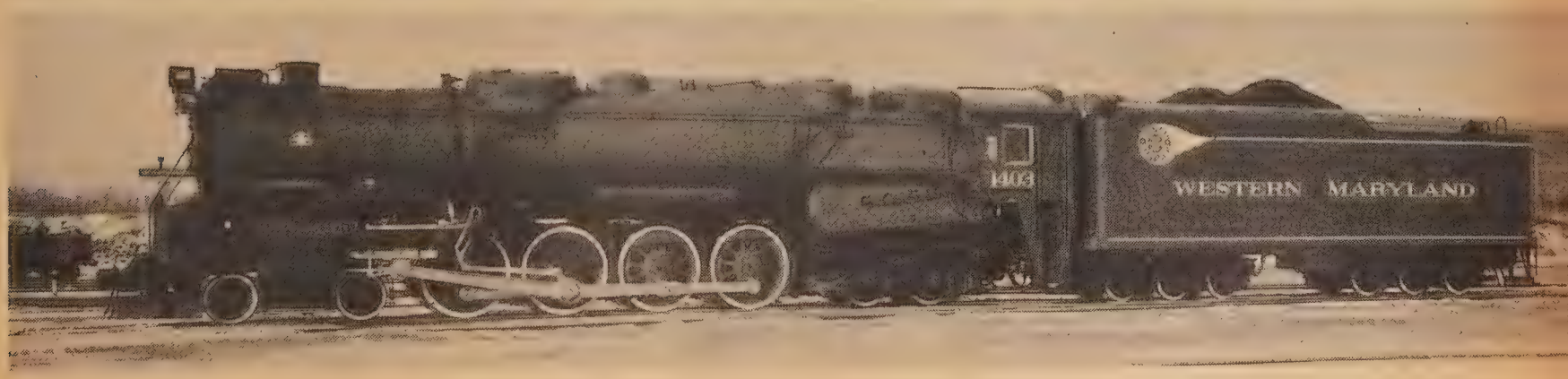
Despite that dismal outlook, there are some 4-8-4's, a very few, that public-spirited railroads have donated to cities as gifts to posterity. We thank those roads and wish there were more. Here is a partial list:

Frisco No. 4524, Springfield, Mo.
Cotton Belt No. 819, Pine Bluff, Ark.
Frisco, 4500 series, Kansas City, Mo.
Frisco No. 4500, Tulsa, Okla.
Milwaukee Road No. 265, Milwaukee,
Santa Fe No. 3759, Kingman, Ariz.
NC&StL No. 576, Nashville, Tenn.

We hope readers can add to it. ●

Negative in Don Wood collection

One of the beautiful 4-8-4's, less than ten years old, that was scrapped ignominiously when the Western Maryland dieselized.



Eastbound from Fort Riley Military Reservation to Junction City in 1907, the open car *Kansas* carries a load of Junction City & Fort Riley passengers over the Republican River. (In the background you can see the Union Pacific Railroad bridge.)

The Life of Riley

by Steve Maguire and Allison Chandler

IN THE EXACT geographical center of the United States, duly marked by a monument, is a vast sprawling area known as Fort Riley, originally a frontier outpost guarding the early settlers from Indian raids. This area partly overlaps Junction City, a leisurely Corn Belt town dozing at the fork of three rivers, the Smoky Hill, the Republican, and the Kansas. Twenty miles west another settlement sprang up and called itself Manhattan. Linking these comunities each with not over 4,000 population in the halcyon days of electric traction, were the rails and wires of an almost-forgotten trolley line that glinted and flashed under the hard Kansas sun.

As early as 1886—even before that great pioneer Frank J. Sprague established a trolley system in Richmond, Virginia—a group of Junction City business men and farmers envisioned a street railway that would reach four miles from the downtown section to a point within the military reservation. But they couldn't raise enough money and so it was never built.

The same fate befell a similar venture three years later. But in 1900 a third attempt won. Incorporators of the trolley company also bought the city lighting franchise. They erected a new power plant to replace one that had been using power from a river dam and they set up a car barn across the street from it.

Before laying rails they had to get permission from the Federal Government as well as a local franchise. The route stretched from Junction City along Grant Avenue (now Highway 40 to and across the muddy Republican River into the reservation. Construction got under way in 1901. Since Kansas land is flat, the only real problem was bridging the Republican River. This was done with a four-span steel structure, about 100 feet long, that rested on concrete pilings.

On August 1, 1901, the first car of the new Junction City & Fort Riley line, gay with fluttering flags and streamers, rolled in triumph over the newly-laid rails from Junction City to the reservation terminal at Waters Hall. Thousands of voices cheered. Farmers from many miles around had driven buggies and wagons into town, with their families and well-filled lunch baskets, to witness the event.

Those early cars were small, closed, single-track Toonervilles with open platforms, but a little journey to or from the Fort in one of them soon became a tradition in "the life of Riley." Later, after the line had expanded, bigger equipment was

used. In the spring of 1903 a flood that inundated Junction City put the trolleys to a severe test. Foaming high water cut the line just west of the bridge. Fortunately, one car remained on the Fort Riley side. With it the company continued to transport passengers between the two terminals by operating shuttle services and ferrying them across the water in a rowboat.

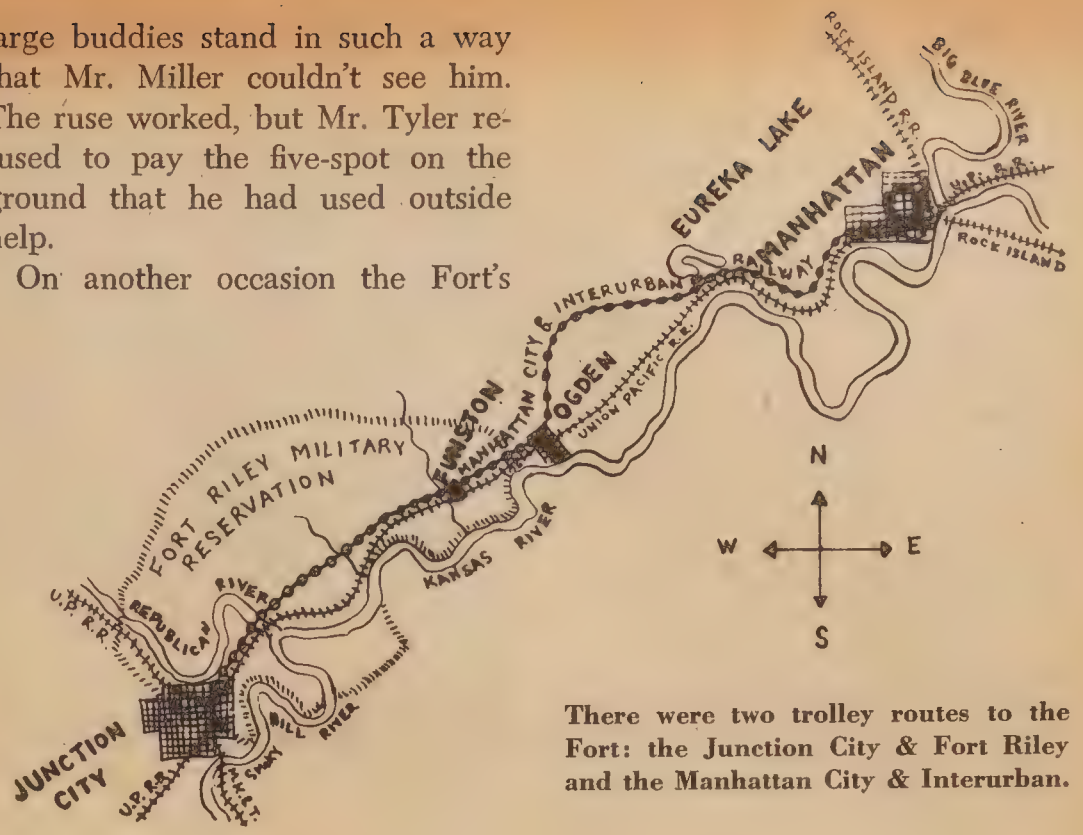
The large number of military personnel riding to and from the Fort was at the same time a source of revenue to the trolley company and a pain in the neck. Often the men were hard to manage. Between guzzling liquor, indulging in horseplay, trying to beat their fares, and making passes at the young ladies, the situation became so acute that the Fort commander posted a guard on each car to keep order. Sometimes a group of soldiers would be overpowering a guard when the motorman and conductor would go to his rescue. On pay days and for two or three days thereafter *two* guards were placed on each car.

In those days privates earned a meager $13 a month, so you can understand why they nursed every nickel and resented paying carfare. It cost a dime to ride from the Fort into Junction City but only five cents to the Red Box passing track. At Red Box a noisy amusement park offered the soldiers fun, popcorn, soft drinks, and a bit of female companionship.

When an eastbound car stopped there a fresh batch of Uncle Sam's boys usually climbed aboard for the trip to Junction City. Trolley crews found it difficult, if not impossible, to spot all the new arrivals and get a nickel from each. Apparently it didn't occur to them to adopt the fare-zone plan, collecting a nickel from *all* passengers at the halfway mark.

One soldier made a five-dollar bet with Frank Tyler, the trolley-line manager, that he could steal at least one ride on Conductor John Miller's car in a given thirty-day period. Day after day he tried vainly to fool the hawk-eyed conductor. At length he hid in a corner and had two large buddies stand in such a way that Mr. Miller couldn't see him. The ruse worked, but Mr. Tyler refused to pay the five-spot on the ground that he had used outside help.

On another occasion the Fort's personnel was divided into two opposing armies for maneuvers. Each side was ordered to take as many prisoners as possible from the rival army during the war games. One enterprising squad chartered a trolley at Junction City, piled on board, and told the motorman to take them to Waters Hall. As the car neared the military post, sentries stopped it as a routine procedure but, not seeing anyone aboard, quickly waved it on. The soldier-passengers had lain down on the floor to keep out of sight. Once inside the reservation, they unloaded, sneaked into the opposing camp, and effected a surprise capture.

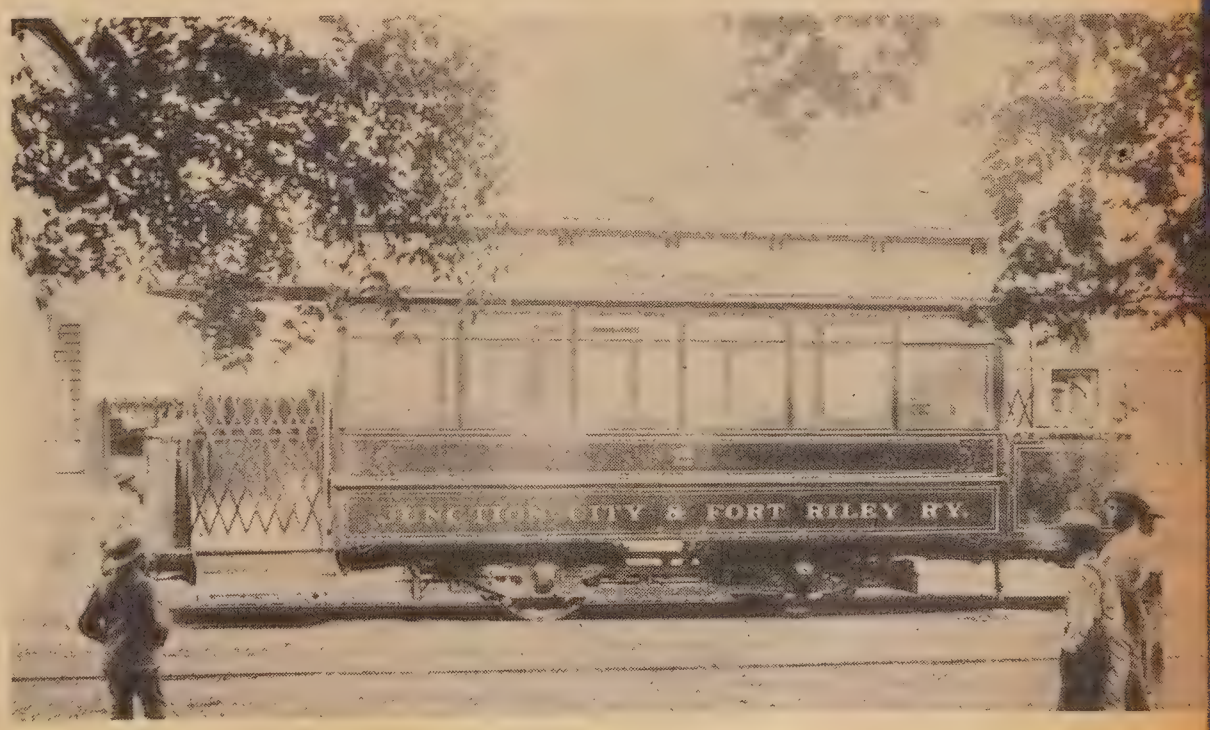


There were two trolley routes to the Fort: the Junction City & Fort Riley and the Manhattan City & Interurban.

In 1906, the trolley line pushed eastward to the west bank of One Mile Creek, making it the company's final easternmost terminal for its own right-of-way.

BUT trolley service kept on growing. The next objective was Manhattan (population 3,000 as against Junction City's 4,000). This rural community boasted a Union Pacific depot and a State Agricultural College. It was drawn into the Fort Riley orbit by three Minne-

No. 2 had two open platforms when it went into service on the JC&FR in 1901.



apolis men: Dr. George W. Smith, Joe West, and Joe's father, Will R. West. In 1908, the father obtained a franchise to build and operate an electric line to be known as the Manhattan City & Interurban Railway.

Joe settled down in Manhattan and promptly bought sites for a powerhouse and car barn. Gangs of workmen laid rails and strung wires to connect the UP station with the college and then, after cars had begun operating June 10, 1909, they pushed the line northward on Main Street. By that time other members of the West family had moved in from Minneapolis to assist in running the new street railway.

In 1911 the Wests decided to extend the MC&I through the Fort Riley reservation and on to Junction City along a route roughly paralleling the Union Pacific tracks and, for part of the way, the Junction City & Fort Riley. On March 4, 1911, Congress authorized this extension through the military post, and the gangs went to work again. Fifteen months later cars began running as far as Eureka Lake, an amusement spot west of Manhattan, but during 1912 they ran only on Sundays and holidays to serve the park.

Instead of paralleling the JC&FR, the MC&I made an agreement to join rails with the other company at One Mile Creek and obtain trackage rights into the Junction City terminal by paying one dollar per car-mile. After that, the Wests bought three heavy interurban cars from the St. Louis Car Company at $7,500 apiece, Nos. 900, 901, and 902, and put them on the Junction City run, beginning in 1914 about two months after the start of World War I. Soon eleven cars were operating daily between the terminals. However, revenue dropped off eventually because of competition from jitney buses, and the fact that many of the soldiers were sent to the Mexican border.

WHEN America entered the war in April, 1917, the transportation business made a sudden and dramatic upsurge. Fort Riley became an armed camp with thousands of rookies in training. A new Army city known as Camp Funston was built at the eastern end of the reservation, cutting off the MC&I and forcing it to relay a mile and a half of track at its own expense.

Both Junction City and Manhattan filled up rapidly with trainees on week-end passes, not to mention relatives and not-too-shy girl friends. For a while the Junction City & Fort Riley and the MC&I basked in a bright moontide of prosperity.

The Junction City line—owned by United Light & Power Company—ordered four large trailers, each with a capacity of 100 passengers, and made a deal whereby they would operate over three miles of Manhattan City & Interurban track to Camp Funston at a dollar per car-mile.

Also in 1914 the Junction City line bought two long, wooden, interurban cars second-hand from the St. Louis Car Company. These cars, numbered 2 and 3, were to serve the JC&FR for as long as it lasted. Their line had six other wooden cars, smaller and closed, numbered 4 through 9, and an open trolley named the *Kansas*.

Riding the *Kansas* by moonlight with your girl friend, holding her hand and watching the night breeze rustle her hair, was an unforgettable experience. No one will ever know how many romances blossomed in that famous car on warm evenings.

As rapidly as passenger traffic had risen in 1917, it slumped equally fast after Armistice Day with the depopulation of Camp Funston. Both the JC&FR and MC&I were hit hard, but the Manhattan line, with 15 miles of track to maintain, took the worse beating. The year 1919 saw a 33 percent drop in MC&I fares, and in 1920 another debacle. Both roads put up a fight. The Junction City cars were cut back to their original terminal at One Mile Creek

(Left) The last car bought by United Power & Light Co. for the Junction City & Manhattan was originally No. 209 of the Topeka Railway. (Right) An earlier type was No. 701 of the Manhattan City & Interurban as it looked about fifty years ago.

Military personnel raised so much mischief on JC&FR cars that the Fort commander posted a guard on each one. Shown here are the *Colorado*, crew, and a guard.

while the Manhattan interurbans made a gallant but hopeless effort to keep their half-hourly service.

The MC&I reduced its losses in 1920 by eliminating local Manhattan operation. Then it dropped its through service into Junction City over the JC&FR tracks. After that the harrassed management did a strange thing—they literally cut down their overhead!

Will West had been down in Louisiana looking around. While there, he noted that the New Orleans & Lower Coast Railroad was doing rather well by operating motor trucks with flanged wheels on its rails but at slow speeds.

"That," he said, "is what we'll do."

Thereupon the Manhattan line removed all of its overhead wires and began carrying passengers over its rails in four-wheeled automobiles. Truck frames fitted with flanged wheels for the new equipment were built by a factory in Wisconsin, motors were installed, and a local carpenter added the bodies.

The cars which had served the life of Riley so well for years were sold, together with the trolley poles and gleaming copper wire. One interurban brought $3,500. The rest were scrapped. But the new *gas cars*, as they were called, did not operate smoothly on the bumpy city and interurban tracks. With dismaying frequency their wheel bearings burned out. The Wests experimented with several types of bearings without success. Meanwhile, traffic revenue fell far below expenses.

The franchise held by Will West since 1908 was to have lasted twenty years, but by the summer of 1922 the Manhattan City & Interurban Railway had sunk so deeply into the red that it went into voluntary bankruptcy. A few weeks later the C. L. Brown utility interests of Abilene, Kansas, bought the entire line, paying ten cents on the dollar for its old stock.

The new owners re-chartered the line as the United Traction Company and, to the surprise of most folks in that area, re-electrified both the city and suburban routes. For rolling stock they bought some second-hand trolley cars from the Topeka Railway and, later on, used some Junction City cars also.

There appears to have been a tie-in between United Traction and the United Power & Light Company which controlled the JC&FR. After the old Manhattan City service had been revived, the Brown interests sold it outright to UP&L. Thus for the first time the two trolley lines in the general vicinity of Fort Riley came under the same ownership. Cars 2 and 3 of the Junction City & Fort Riley line began to be used regularly in inter-city service on a two-hour headway.

In 1928 Topeka Railway offered to sell five of its 200 series interurban cars. United Power & Light purchased one of them, No. 209, for $100 plus freight charges. It was the last piece of rolling stock UP&L ever bought.

THE prosperity the country as a whole had been enjoying since the war was about to end. But even before the stock market crash of 1929 the UP&L trolleys surrendered to the inevitable.

Results hadn't justified the cost of rehabilitating the Manhattan line. Even the freight service which had been started in 1923 to haul coal from the Union Pacific tracks to the Agricultural College showed losses each year. By October, 1928, the company decided to end its rail service in Manhattan and as far west as Fort Riley, but would continue to operate cars between Junction City and the reservation.

November 25th was a sad day in the life of Riley. The old MC&I rails were abandoned. Two buses, reeking of gasoline, replaced the beloved electric cars, while a motor truck hauled coal to the College.

At the Fort, the boys in khaki didn't like that. They could still ride trolleys into Junction City, just as their predecessors had done before them, but even this route seemed to be operating on borrowed time. The Brown interests were about to ditch it. Pretty soon United Light & Power sold the last relic of trolley service in the area to a new outfit, United Traction Company (no kin to the corporation which operated MC&I).

For an Indian-summer interlude two fading cars continued to plod over the four-mile route between the Fort and the junction of three rivers. Then in 1934, as February ended, United Traction ran up the white flag of surrender to the world-wide depression. On that date, the 28th, Uncle Sam's boys rode a trolley into the reservation for the last time, too glum even to make passes at the girls.

After that buses of the Cardinal Stage Lines took over. A bit of glory had vanished forever from the life of Riley. ●

NEW HAVEN ELECTRIFICATION

It Began Experimentally on a 4.95-Mile Branch Line, June 3, 1895, and Saw the Introduction of the Third Rail, MU Cars, and High-Speed Passenger and Freight Operation

by SY REICH

Open cars ran between Nantasket Beach and Pemberton, Mass., on the first electrification of a steam railroad in America.

A FABULOUS era began on the New Haven in 1895 with the first electrification of a steam road. This era saw the introduction of the third rail. It saw high-speed passenger and freight operation. It saw the first large single-phase AC high voltage system and the rise of a fleet of fast, high-capacity, multiple-unit cars and ten successful ignatron passenger locomotives. But the era ended not long ago when Electro-Motive put out its FL-9 electric diesel-electric locomotives.

A look-back will show how all these wonders came to pass. The electrically-propelled vehicle was developed during the 1880's and '90's. In those decades many city transit lines were electrified, many others were built, but steam ruled the high iron. Prior to June 3, 1895, almost nobody dreamed of operating a main-line railroad without the nostalgic steam whistle and firebox.

General Electric

On that date, however, certain engineers and officials of the steam-powered New York, New Haven & Hartford, desirous of improving their Shore Line operation between Boston and New York, cautiously opened an electrification of the short branch between Nantasket Beach and Pemberton, Mass.

This 4.95-mile experiment made history. It anticipated by several months the famous Baltimore & Ohio tunel electrification at Baltimore and was, in fact, the first electrification of a steam road in America.

Actually, it involved 13.01 track-miles. Trolley wire shaped like a figure 8 was hung directly over the track on supporting brackets without the use of insulators. The equipment used on this pioneering job consisted of six open-motor passenger cars—not unlike the "toast-rack" trolleys which later became popular on many city systems—and four closed express motors, which were assigned also to haul freight trains. Each car had an average weight of 60,000 pounds.

Several days before the official opening, company executives and newspaper men took on an inspection trip. A special three-car train left Boston behind a high-wheeled steam express locomotive. Upon arrival at the junction with the electrified branch, the steamer was uncoupled and a closed express motor was coupled onto the train.

Next day, a Boston newspaper proclaimed, "The electric car effortlessly started the special train and accellerated it to 60 miles per hour much smoother and faster than the steam locomotive that brought the train down from Boston."

Preliminary tests on the Nantasket Beach branch showed that the trolley-pole method of current collection was not satisfactory. Although trolley wire is good for getting electricity to a moving vehicle on a slower route, New Haven operation had to avoid the trouble caused by poles leaving the wire at high speeds. On July 26, 1896, the Nantasket Beach experiment was extended a half-mile to East Weymouth, with third rail.

The original third rail differed greatly from the type now found on many rapid-transit and main-line electrifications. This rail was shaped like an inverted V and weighed 98 pounds to the yard. Placed on insulators between the two running rails, its apex pointed about an inch above them. Each motor car of the first electrification had a third-rail pick-up shoe mounted between the rails on each truck so that the shoe rode on the apex surface of the inverted V. The third rail had breaks at switches and crossings.

Electric trains on the Nantasket Beach branch ran most of the way with trolleys. During the last half-mile the poles were lowered and the motorman operated a control switch, the train proceeding with current from the third rail.

In 1896, the Nantasket Beach line carried some 700,000 passengers as the ten motor cars racked up 6000 train-miles on the 5½-mile branch.

THE NANTASKET BEACH project proved so successful that in December, 1896, the New Haven electrified its lines between Hartford and New Britain (9.3 miles), New Britain and Berlin (3 miles), and New Britain and Bristol, Cooks, Plainville, and Forestville (one track of a double-track line—8.8 miles), using the same third-rail operation. A new power plant was built at Berlin. Trains usually consisted of two cars, each 51 feet long and seating 96 passengers. One car was a motor, the other a trailer. Both had third-rail shoes to bridge the gaps at road

Old print from Frank Leslie's Illustrated Monthly

Years before electrification, diamond-stacked engines used the predecessor of New York City's Grand Central Terminal that was known as the Grand Union Depot of the New York Central & Hudson River and New Haven & Harlem railroads.

crossings and also for special work.

These pioneer projects proved that electric-powered trains on steam roads could carry more passengers and make more stops on fast schedules. The New Haven Railroad learned that such trains were capable of rapid acceleration and smooth running. They discovered that these same high-speed passenger locomotives could be used on freight.

But not even versatility and good performance satisfied the New Haven engineers. They conducted a series of tests to compare the cost of operating steam and electric trains, and determined that electrification was economically sound.

They found that this power enabled them to increase a line's capacity without laying more tracks and it permitted easier operation with less discomfort to passengers from smoke, noise, and cinders. It also made possible the speeding-up of schedules because of the electrics' more rapid acceleration and higher attainable speeds. Furthermore, if there was sufficient traffic density, the electrics could do all those things for less money than steam could.

In 1896 the New Haven extended its Nantasket Beach electrification 4.4 route-miles to Braintree, and in '99 an additional 3.4 miles from Nantasket Junction to Cohasset. Two years later the road electrified between Providence, R. I., and Fall River, Mass—two tracks to Warren, R. I., and one to Bristol, R. I., and Fall River—for a total of 11.95 route-miles and 74.26 track-miles. A new power plant was built at Warren.

All the projects mentioned so far used 600 volts D.C. The 46 cars operating on the Fall River line included 24 trailers, 9 combine coaches, 2 baggage and express motors, and 11 coach motors. Each was 40 feet long, weighed 20,000 pounds, and had four 80-hp motors. One standard 70-foot car was attached.

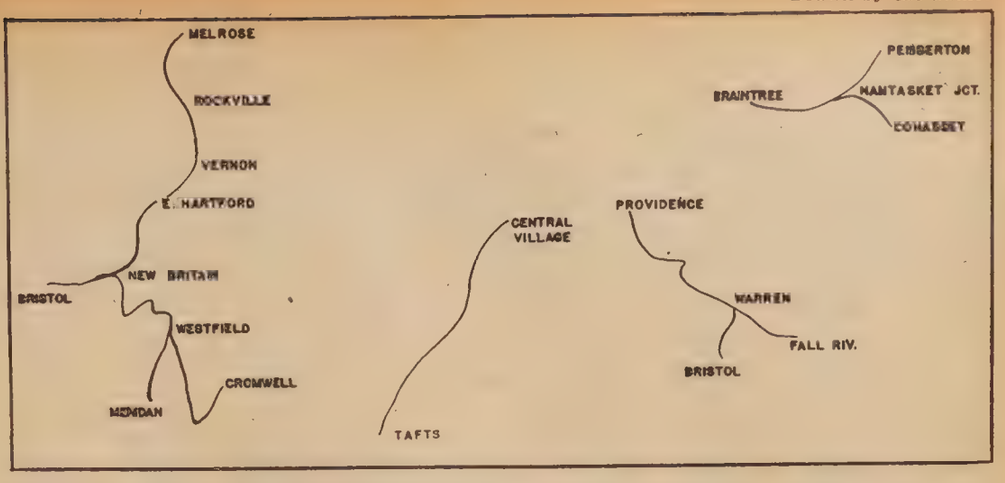
A setback came in 1904, the year after New York Central began rebuilding its old Grand Central Station into the Grand Central Terminal of today. In 1904, declining traffic caused the New Haven to abandon its Braintree-Cohasset electrification. This emphasizes the fact that "juice" operation is economical only for dense traffic. Then in 1932, with the Depression in full swing, the NH gave up its Providence electrification for the same reason.

Meanwhile, on December 11, 1896, a project for moving freight only by electric power had gotten under way at New Haven, Conn. Although such power can and does handle freight efficiently, passenger service was the main reason for the New Haven's electrification. The 1896 setup involved the Manufacturers' Railway, a switching and transfer road founded by Bigelow Boiler Company but taken over later by the New Haven Railroad. This little road began

operating a steeple-cab electric locomotive, No. 1. The One-spot, built by Thompson Houston with a B wheel arrangement, was put to work switching freight cars between the New Haven yards and various industrial plants. It used 600 volts DC from an overhead trolley wire.

In 1906 and 1907 the New Haven electrified in part of Connecticut, mostly passenger operations, and installed catenary experimentally between Burnside and Vernon to replace trolley wires in some high-speed experiments.

Drawn by the author



Early New Haven RR. electrification in Connecticut, Rhode Island, Massachusetts.

THUS, early in the 1900's, this road had undergone nearly a decade of electrification. But a major test was about to come.

When the City of New York, disgusted with coal smoke, ordered the electrification of service into Grand Central, the New Haven considered the matter carefully. It had a choice. Either electrify the terminal operations over New York Central trackage, erecting a steam-engine terminal at Wodlawn and changing motive power there, or undertake a vaster and more expensive project.

As we have seen, the NH had acquired experience with catenaries as well as third rail and had used both MU cars and electric locomotives, so its engineers and officials had ample background for the decision they would have to make. These were men of vision. They foresaw a building boom in Westchester County and lower Connecticut. They realized that a great number of trains would be needed to handle the future commuters in addition to the people traveling between New York, Boston, Springfield, and other New England points. Such traffic could not be handled except by an electified line—unless the company were to increase the number of tracks on its crowded four-track main stem.

Facing this situation, the New Haven management decided upon multiple-unit electric cars for commuters and local passengers, with through trains pulled by electric locomotives. For the first installation in the Grand Central scheme they chose the stretch between Woodlawn and Stamford and between Harlem and New Rochelle Junction, and if this electrification turned out well they planned to extend it.

In 1905 the New Haven Railroad asked General Electric and the Westinghouse Electric & Manufacturing Company for bids to electrify these lines. The NH selected an overhead system to avoid the danger of tresspassers being electrocuted on third-rail electrifications as some had been in the past. Catenary suspension, declared successful after high-speed experiment, was decided upon.

The New Haven called for proposals using either 600 volts DC or 3300 volts AC in the wire. In each case, locomotives had to be able to operate on New York Central electrification into Grand Central, which used underrunning third rail supplied with 600 volts DC. This necessity, plus the requirement that the locomotives be able to change from third rail to overhead collection at speed, taxed the ingenuity of the great electric companies.

We come now to the conflict between those who favored AC (alternating current), represented by the Westinghouse Electric Company, and the proponents of DC (direct current), General Electric.

The first railway electric operations were carried out with DC. Much experience had been accumulated in designing DC equipment on the New Haven and on many trolley lines throughout the country.

DC motors were not only simple to design but had certain technical advantages over AC. However, direct current is hard to transmit. DC voltage is not easily increased nor decreased economically. The common 600 volts of DC, which was very low, required the use of substations supplying the third rail or overhead wire to be placed close together. This was impractical on long electrified lines.

AC, on the other hand, is easy to transmit. It can be stepped up to high voltage or reduced to low voltage without difficulty using the very efficient transformer. Thus, because AC could be transmitted at high voltages more cheaply than DC, substations for it could be placed much further apart. Transformers housed on the locomotive could reduce the high voltage AC, collected from overehad, to low voltage AC for use in the locomotive motors. AC motors, though, were less efficient than DC motors.

Thus the battle shapped up. Advocates of AC pointed to the huge gain in efficiency of transmission, the requirement for fewer substations, and the general economy of less copper wire being needed. On the other hand, DC supporters cited the greater efficiency of DC motors and the vast experience gained from years of DC electrifications.

New Haven engineers, planning for an electrified entry into the new Grand Central Terminal, then under construction, faced this problem: *DC or AC, and what voltage?*

(Continued in next issue)

Electrics Into Grand Central Terminal

Roster Compiled by Sy Reich

NEW HAVEN RAILROAD—ELECTRIC LOCOMOTIVES

Class	Road Numbers	Wheel Arrangement		Cur'nt	HP	Trac. Eff.	Weight	Bldr.	Date	Dri.	Max. Spd.	Motors	Notes
EF-1	076-0111	1-B+B-1	GQ	AC	1340	43,500	232,300	B-WH	1912-'13	63	40	8 WH 409-C	m
EF-2	0112-0116	T-B+B-1	DG	AC	1350	50,000	282,000	A-GE	1926	42		4 GE 718-A	m,MG
EF-3a	0155-0159	2-C+C-2	GQ	AC	4860	90,000	493,000	GE	1943	57	65	6 GE 627-N	m
EF-3b	0150-0154	-C-C-2	GQ	AC	4860	90,000	492,000	B-WH	1942	57	65	6 WH 427-N	m,s
——	068	4-4-0x0-4-4	GQSR	AC	1800	48,500	291,000	GE	1916	54	45	4 GEA 614	
EP-1	0300-0326	1-B-B-1	GLQ	AC-DC	1420	42,263	220,140	B-WH	1906-'08	62	88	4 WH 130	m,s,(1)
EP-2	01-041	1-B-1+1-B-1	GQ	AC-DC	3120	47,500	(2)	B-WH	(2)	63	66	12 WH 409C2	m,s
EP-3a	0351-0360	2-C+C-2	GQ	AC-DC	3440	68,400	403,500	GE	1931	56	80	6 GEA 621	m,s,(3)
EP-4	0361-0366	2-C+C-2	GQ	AC-DC	3600	68,200	432,000	GE	1938	56		6 GEA 622	m,s,(4)
EP-5	370-379	C-C	DG	AC-DC	4000	87,625	350,500	GE	1955	40	105	6 GE 752-F	m,s
——	069	1-A+B-A-1	GQ	AC-DC	1700	43,560	234,640	B-WH	1911	63	54	8 WH 409-A	m,s
——	070	2-4-0x0-4-2	SR	AC-DC	1600	48,000	270,000	B-WH	1909	57	61	2 WH 406	m,s,(5)
——	071	1-B+B-1	GQ	AC-DC	1600	46,613	289,300	B-WH	1909	63	55	4 WH 403	m,s
——	072	1-B+B-1	GQ	AC-DC	1600	47,595	256,620	B-WH	1911	63	55	4 WH 403-B	m,s
——	073-075	1-B+B-1	GQ	AC-DC	1700	47,440	248,140	B-WH	1912-'13	63	54	8 WH 409-C	m,s,(6)
EY-1	Mfg. 3-4	B-B	DG	DC	400	12,500	59,000	B-WH	1914	36		4 WH 101-K	
EY-1a	Mfg. 5-6	B-B	DG	DC	680	28,000	112,000	B-WH	1924	40		4 WH 308-D	
EY-2	0200	B+B	GQ	AC	655	39,500	158,000	B-WH	1911	63	25	4 WH 410	
EY-2	0201-0214	B+B	GQ	AC	655	39,800	159,200	B-WH	1912	63	25	4 WH 410	
EY-2a	0215	B+B	GQ	AC	655	39,800	159,200	B-WH	1911	63	25	4 WH 410	
EY-2b	0218-0223	B+B	GQ	AC	655	45,200	181,000	B-WH	1927	63	25	4 WH 410	
EY-3	0216-0217	B+B	DG	AC	500	52,800	211,500	A-GE	1926	42		4 GE 286-A	MG
EY-2c	0224	B+B	GQ	AC	655	39,800	159,200	B-WH	1912	63	25	4 WH 410	(7)

NEW HAVEN RAILROAD — MULTIPLE-UNIT CARS

Road Nos.	Type	Bldr.	Date	Weight	T.E. (AC)	Motors	Seats	Length	Width	Height
4010	RRR CE Mtr. Coa.		1914	156,000		4 GEA 613B	76	71'-11"	9'-8¾"	14'-3"
4011			1911	139,700		4 GEA 613B	76	70'-5"	9'-9"	14'-0"
4020-4023	RRR OE Mtr. Coa.	Std. S.	1901	173,480	17,500	4 WH 156	76	70'-10½"	9'-7⅛"	14'-5½"
4024-4027	RRR OE Mtr. Coa.	Std. S.	1912	171,000	20,000	4 WH 409D	76	70'-10½"	9'-7⅛"	14'-5½"
4028-4040	RRR CE Mtr. Coa.	Std. S.	1914	175,100	20,000	4 WH 409D	84	71'-11"	9'-7⅜"	14'-5½"
4041-4051	RRR CE Mtr. Coa.	Osg. B.	1921-'22	174,000	20,000	4 WH 409D	84	71'-11"	9'-7⅜"	14'-1"
4052-4055	RRR CE Mtr. Coa.	(9)	(9)	176,100	20,000	4 WH 409D	84	72'-0½"	9'-7⅜"	14'-5½"
4070-4094	AR CE Mtr. Coa.	Osg.B.	1926	176,000	20,000	4 WH 409D	120	79'-7¼"	9'-10¾"	14'-0¼"
4095-4097	AR CE Mtr. Coa.	Osg. B.	1929	178,900	23,000	4 WH 412B	120	79'-7¼"	9'-10⅜"	14'-0¼"
4098-4109	AR CE Mtr. Coa.	Osg. B.	1931	180,000	23,000	4 WH 421B2	120	79'-7¼"	9'-10⅜"	14'-0¼"
4200-4215	RRR OE Tr. Coa.	Std. S.	1909-'12	101,500	Control Trailer		76	70'-10½"	9'-7⅛"	14'-5½"
4216-4236	RRR CE Tr. Coa.	Std. S.	1914	103,200	Control Trailer		84	71'-11"	9'-7⅜"	14'-5½"
4238-4251	RRR CE Tr. Coa.	Osg. B.	1921-'22	103,450	Control Trailer		84	71'-11"	9'-7⅜"	14'-1"
4252-4288	AR CE Tr. Coa.	Osg. B.	1926	103,600	Control Trailer		120	79'-7¼"	9'-10⅜"	14'-0¼"
4289-4294	AR CE Tr. Coa.	Osg. B.	1929	104,500	Control Trailer		120	79'-7¼"	9'-10⅜"	14'-0¼"
4295-4313	AR CE Tr. Coa.	Osg. B.	1930	105,200	Control Trailer		120	79'-7¼"	8'-10⅜"	14'-0¼"
4400-4488	SS Mtr. Coa.	Pull. S.	1954	156,900		4 WH 100 hp	120	86'-9"	10'-3⅛"	13'-0"
4650-4651	RRR OE Tr. Comb.	Std. S.	1912	101,500	Control Trailer		54	70'-10½"	9'-8½"	14'-5½"
4652-4656	RRR CE Tr. Comb.	Std. S.	1914	103,700	Control Trailer		58	71'-11"	9'-7⅜"	14'-5½"
4657	RRR CE Tr. Comb. (10)	Std. S.	1915	103,700	Control Trailer		58	71'-11"	9'-7⅛"	14'-5½"
4660-4661	AR CE Tr. Comb.	Osg. B.	1930	112,500	Control Trailer		87	79'-7¼"	9'-10⅜"	14'-0¼"
4670-4676	SS Mtr. Comb.	Pull. S.	1954	158,200		4 WH 100 hp	92	86'-9"	10'-3⅛"	13'-0"
5110-5111	SS Mtr. Club	Pull. S.	1954	156,800		4 WH 100 hp	45	86'-9"	10'-3⅛"	13'-0"
5112	SS Mtr. Club	Pull. S.	1954	156,000		4 WH 100 hp	44	86'-9"	10'-3⅛"	13'-0"
5113	SS Mtr. Club	Pull. S.	1954	155,600		4 WH 100 hp	67	86'-9"	10'-3⅛"	13'-0"
2759	RRR Tr. RPO-Bagg.				Control Trailer					

New Haven—Electric Diesel-Electric Locomotives

Class	Road Nos.	HP	Builder	B. Mdl.	Whl. Arrgt.	T.E.	Weight	Date	Notes
EDER-5	2000-2029	1750	GM-EMD	FL-9	B-A1A	56,940	284,500	1957	m,s
EDER-7	3100,3101	1720	FM	P12-42	B-2	28,725	224,100	1957	m,s

NH—Electric Diesel-Mechanical Locos, Train Sets

EDER-6	3000-3001	1000	BLH	RP 210H	B-2	28,775	194,100	1956	m,s
——	140-141		Budd	Hot Rod RDC-1 cab unit	(8)	6,900	123,700	1956	m
——	160-163			Hot Rod RDC-1 blind motor	(8)	6,900	121,300	1956	m

NEW YORK CENTRAL — ELECTRIC LOCOMOTIVES

Class	Road Nos.	Wheel Arngt	T.E.	Weight	Builder	Date	Dri.	Notes
P-1a	200-221	2-C+C-2	77,925	418,900	Alco-GE	1929-'30	48	m,s,(11)
P-2a	222	2-C+C-2	74,075	406,480	Alco-GE	1951	48	m,s,(11)
P-2b	223-242	2-C+C-2			Alco-GE	1955	48	m,s,(11)
Q	150-156	B-B	50,375	201,500	Alco-GE	1926	44	
R	300-301	B-B-B-B	88,500	354,000	Alco-GE	1926	44	
R-1	160-165	B+B	50,357	201,500	Alco	1910	48	
R-1a	166-169	B+B	60,500	242,000	GE	1914	48	
R-1b	170-171	B+B	66,500	249,300	Alco-GE	1926	48	
R-2	302-343	C+C	66,600	266,400	Alco-GE	1930-'31	44	
S-1	100	2-D-2	36,600	234,200	Alco-GE	1904	44	(12),ms,
S-2	101-134	2-D-2	(13)	(13)	Alco-GE	1906	44	(12),ms,
S-3	137-146	2-D-2	38,075	249,800	Alco-GE	1908-'09	44	(12),m,s
T-1a	247-256	B-B+B-B	63,050	252,200	Alco-GE	1913	36	
T-2a	257-262	B-B+B-B	69,775	279,100	Alco-GE	1914	36	
T-2b	263-272	B-B+B-B	70,125	280,500	GE	1917	36	
T-3a	273-282	B-B+B-B	66,400	292,600	Alco-GE	1926	36	

NOTES, ABBREVIATIONS

Roster of electric power and MU cars using Grand Central Terminal, New York City, was compiled from data supplied by Asst. V.P., Equipment, New York Central System, and Chief Mechanical Officer, New York, New Haven & Hartford, C. S. Lansing and H. R. Johnnessen.

New York Central roster is accurate as of April 22, 1958, and New Haven roster is accurate as of April 30, 1958. Abbreviations: GQ—geared quill; DG—direct gearing; GQSR—geared quill side rod; GLQ—gearless quill; Cur'nt—current; B. Mdl., builder's model; B-WH—Baldwin-Westinghouse; A-GE—Alco-General Electric; GE—General Electric Company; Dri.—driver diameter in inches; Max. Spd.—maximum speed in miles per hour; Mtrs.—number and type of motors.

M, multiple-unit control; MG, motor generator locomotive; s, equipped with steam generator; RRR, railroad roof; AR, arch roof; SS, stainless-steel construction with turtleback roof; CE, closed end; OE, open end; Mtr., motor; Tr., trailers; Coa., coach; Comb., combine; RPO-Bagg., railway post office-baggage; Std. S., Standard Steel Car Co.; Osg. B., Osgood Bradley Car Co.; Pull St., Pullman Standard Car Mfg. Co.; T. E. (AC), tractive effort when operating on AC in pounds; Length, length over couplers; Width, width over side sills; Height, height from rail to top of car roof but not including pantograph; AGEIR, Alco-General Electric-Ingersoll Rand; Bld. Mdl., builder's model; ACF, American Car & Foundry Co., St. Louis, St. Louis Car Co.; Pr. St., Pressed Steel Car Co.; N.Y.C., New York Central Railroad; BME, baggage-mail-express; Bagg., baggage.

NYC MU Brake Equipment: All cars except 4500's are AMU. 4500's are D22 MUE. All NH MU cars are AMUE except washboards which are high speed electro-pneumatic.

Numbered Notes

(1) Wheel arrangement changed in 1907 from B-B to 1-B B-1.

(2) 300-304 weighed 350,000 lbs.; 305-316 weighed 356,020 lbs., 317-321 wheighed 357,900 lbs. and 322-326 weighed 356,600 lbs.

(3) 0360 renumbered 350 when 0 prefixes were removed.

(4) 0366 renumbered 360 when 0 prefixes were removed.

(5) Converted to AC operation only, put into freight service with s removed.

(6) No classes were assigned when these units were in passenger service. When equipped for freight operation by removing the DC and steam-generator equipment, they were classed EF-1.

(7) Ex-New York, Westchester & Boston 701, acquired in 1938.

(8) Outside axle of each truck directly geared to a DC traction motor. Inside axle geared to a torque converter which is connected to the diesel motors.

(9) Originally cars 4060-4063 built by Std. St. in 1915 for AC only operation. Converted to AC-DC operation at Van Nest Shops of the NH in 1940-1941.

(10) Former club car 5004 converted at Van Nest in 1941.

(11) Ex-Cleveland Union Terminal engines.

(12) Wheel arrangement of class S-1 and S-2 changed from 1-D-1 to 2-D-2. Four are now equipped with m.

(13) 101, 103-104, 106-107, 109-111, 114, 117-120, 123, 127-128, weight 229,900 and have T.E. of 36,225. Remainder of S-2's have weight of 227,700 and T.E. of 35,600.

(14) These cars were rebuilt. Second date and builder giver rebuilding information.

Paint Scheme

New Haven electric locomotives were originally dark (olive) green with black roofs and underbody. Lettering was yellow. Then lighter (forest) green with yellow striping and lettering and black roofs and underbody. Finally, red, white, and black with contrasting lettering, and black roofs and underbody.

New Haven MU cars originally were Pullman green with black roofs and underbody, white lettering, washboards were natural stainless steel sides, yellow sign boards with dark green lettering, dark green roofs and fronts and black underbody. New paint scheme of older MU's is black with red number board and white lettering. Washboards have had front painted red and white.

New York Central electric lomotives were originally painted black with white lettering. Recently they were being repainted gray with white striping, white lettering, red insignia and black underbody. Older MU cars were originally painted dark green with yellow lettering. Recently cars are being repainted with yellow striping. New cars all have yellow striping.

Renumbering

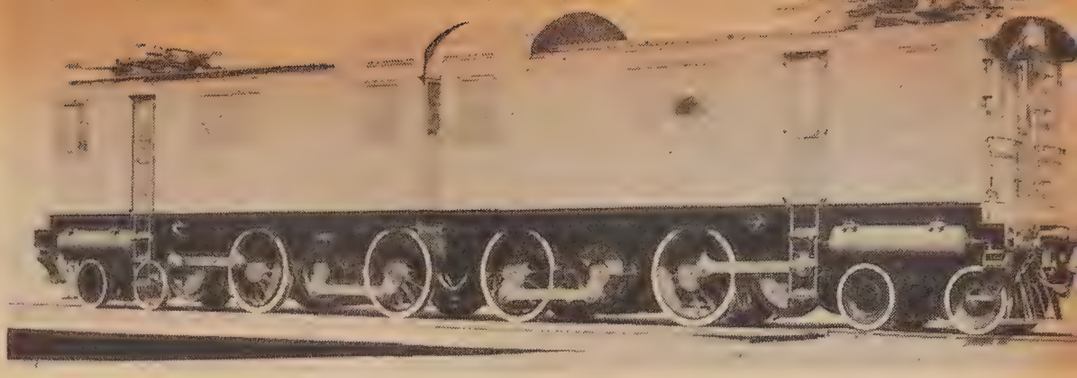
New Haven: Originally, all electric locomotives on the NH (except EP-5) had 0 prefixes to distinguish them from steam locomotives with the same numbers. When steamers were scrapped, 0's were removed and certain renumberings mentioned above were effected.

NYC: S1: 6000 to 3200 to 1100 to 100. S2: 3201-3234 to 1101-1134 to 101-134. S3 3235-3246 to 1135-1146 to 135-146. P-1a renumbered from 1050-1071 to 200-221 to 222-242 (some scrapped, not consecutive). Q: 1250-1256 to 150-156. R: 1200-1201 to 300 to 301. R-2: 1202-1243 to 302-343. T's: 3247-3282 to 1147-1182 to 247-282. MU's were originally 3000's. DES—1500's to 500's.

Collection Devices

All AC-DC New Haven locomotives have two AC pantographs one DC pantograph for overhead third rail in GCT, and underrunning 3rd-rail shoes for operation on the NYC. AC locomotives have two pantographs only. AC-DC New Haven MU cars have AC pantographs and DC third rail shoes. AC only MU's had AC pantographs only.

All NYC electric and electric diesel-electric locomotives have third rail shoes and DC pantographs. NYC MU cars have third rail shoes only. NH electric-diesel-electric locomotives have DC third rail shoes and DC pantographs. Same for NH electric diesel mechanical locomotives except Hot Rod RDC which had no pantographs.



New Haven 068, "Bull Moose," has counterbalanced, geared, quill, side-rod drive.
General Electric photos

Eight-car New York Central MU suburban train; each car has two 225-hp. motors.

NYC—ELECTRIC DIESEL-ELECTRIC LOCOS

Class	Road Nos.	HP	Builder	Bld. Mdl.	Whl. Arngt.	T.E.	Weight	Notes
DES-a	1505		GE		B-B	23,250	93,000	1923
DES-2	1525	2488 300	AGEIR	404-OEB-257	B-B	64-375	257,500	1928
DES-3	526-566	1665 300	AGEIR	404-OEB-255	B-B	64,325	257,300	1930

NEW YORK CENTRAL — MU CARS

Road Nos.	Type	Builder	Date	Weight	No. Mtrs.	Seats	Length	Width	Height	Notes
4000-4123	Coach	ACF	1907	133,000	2-400	78 or 82	69'-3"	9'-8¼"	13'-9⅜"	
4124	Coach	St. L.	1907	138,400	2-400	82	69'-3"	9'-8¼"	13'-9½"	
4125-4154	Coach	St. L.	1907	137,000	2-400	78,82, 94	69'-3"	9'-8¼"	13'-9½"	
4155-4172	Coach	Stt. L.	1907	137,000	2-400	78,82, 94	69'-3"	9'-8¼"	13'-9½"	
4173	Coach	ACF	1907	130,200	2-400	78	69'-3"	9'-8¼"	13'-9½"	
4174-4192	Coach	Pr. S.	1913	123,000	2-400	74	69'-3"	9'-8¼"	13'-9⅜"	
4193-4204	Coach	Std. S.	1917	132,000	2-380	82	63'-5"	9'-8¼"	13'-9½"	
4205-4222	Coach	Std. S.	1918	129,000	2-380	82	69'-3"	9'-8¾"	13'-9½"	
4223-4237	Coach	Std. S.	1921	129,000	2-380	82, 100	69'-3"	9'-8¾"	13'-9½"	
4238-4247	Coach	Std. S.	1924	129,000	2-380	82, 100	69'-3"	9'-8¾"	13'-9½"	
4248-4267	Coach	Std. S.	1924	129,000	2-380	82, 100	69'-3"	9'-8¾"	13'-9½"	
4268-4296	Coach	Std. S.	1925	130,700	2-380	82, 100	69'-3"	9'-8¾"	13'-9½"	
4297-4306	Coach	Std. S.	1926	130,150	2-380	100	69'-3"	9'-8¾"	13'-9½"	
4307-4316	Coach	Std. S.	1928	130,300	2-380	100	69'-3"	9'-8¾"	13'-9½"	
4317-4326	Coach	Std. S.	1927	130,150	2-380	100	69'-3"	9'-8¾"	13'-9½"	
4327-4336	Coach	Std. S.	1929	130,800	2-380	100	69'-3"	9'-10"	13'-9½"	
4350-4355	Comb.	St. L., NYC	1907,'10	139,000	2-400	58, 70	69'-3"	9'-10"	13'-9½"	
4356-4361	Comb.	Pr. S.	1913	123,000	2-400	46	69'-3"	9'-8¼"	13'-9½"	(14)
4394-4397	BME	St. L.	1910	133,000	2-400	—	63'-5"	9'-8¼"	13'-9½"	
4398-4399	Bagg.	St. L., NYC	1910,'18	125,140, 125,800	2-400	—	61'-0"	9'-8¼"	13'-10½"	
4400-4401	Bagg.	St. L., NYC	1907,'25	138,000, 132,000	2-400	—	61'-0" 61'-2½	9'-8¼" 9'-8¼"	13'-10½" 13'-9½"	(14) (14)
4402	Bagg.	Std. S.	1927	125,100	2-380	—	63'-5"	9'-8½"	13'-9½"	
4500-4599	Coach	St. L.	1949-'50	150,680	4-400	130	85'-0"	10'-4"	13'-6"	

New Haven and New York Central Electric Equipment Scrapped

The following New Haven electric locomotives have been scrapped: EY-1, EY-1a, EP-1, 068-077 except 071 to Hoosac Tunnel (B&M), EF-1, EF-2 (two units used as DC converters at Van Nest), EY-2a, 0216 converted to diesel trailer DT-1, 0217-0223, 0300-0310, 0312-0321, 0323-0326, 0363 destroyed in Bridgeport wreck 7/14/52, EY-2, and EY-2c.

These New Haven MU cars have been scrapped: 4020-4030, 4032, 4037-4039, 4042-4044, 4046, 4048-4051, 4053, 4054, 4060-4063, 4200-4227, 4229, 4231-4234, 4237, 4239, 4241, 4242, 4244, 4246, 4247, 4249, 4260, 4650-4657. (In the case of 4060-4063 only the numbers were destroyed, the cars themselves being given appropriate 4052-4055 numbers.)

The following New York Central RR. electric locomotives have been scrapped: 103, 106, 111, 114, 247, 248, 250, 251, 258, 259, 267, 270, 277, 281, 318, 319, 321-323, 327, 330, 331, 334, 335, 336, all DES-3, all Q, all R, all R-1, all R-1a, all R-1b, 302-314, 338-343, 134, all S-3, and all DES-2, DES-a.

As for New York Central MU's the following numbers of each class are still in service: 4000—64, 4124—1, 4125—25, 4155—17, 4173—1, 4174—1, 4193—10, 4205—18, 4223—15, 4238—10, 4248—20, 4268—29, 4297—10, 4307—10, 4317—10, 4327—10, 4500—100, 4350—6, 4356—5, 4394—4, 4398—2, 4400—2, 4402—1.

INFORMATION

ASK BARBARA: Railroad questions are answered here every issue by our research expert—as many as space permits. Top priority is given to subjects that seem to be of wide general interest. Address Miss Barbara Kreimer, *Railroad Magazine*, 205 E. 42nd Street, New York 17, N. Y. No replies will be sent by mail.

1 *In August you gave us a rundown on the Norfolk & Western's diesel-steam situation. Any further news?*

Yes. On July 16, N&W leased temporarily heavy diesel locomotives to replace streamlined Class J steamers, which were stored. Four 2,250-hp units were obtained from the Richmond, Fredericksburg & Potomac, and eight 2,000-hp units from the Atlantic Coast Line Railroad. N&W has on order 268 new diesel locomotive units—general-purpose road switchers and switching units, delivery of which started this month.

"The acquisition of these diesel units," says N&W President Stuart T. Saunders, "will enable us to dieselize completely our operations at present traffic levels. Of the 262 steam locomotives we now own, we will retire 202 between now and the end of 1960. The remaining 60 will be used as standby power to meet demands for locomotives during peak levels of traffic and in emergencies. This program will enable the railway to exhaust the serviceable mileage remaining in its fleet of steam locomotives."

When our August issue went to press N&W had 335 steamers.

2 *I read somewhere that a freight train leaving a Kansas town in 1880 never was heard from again. Details, please!*

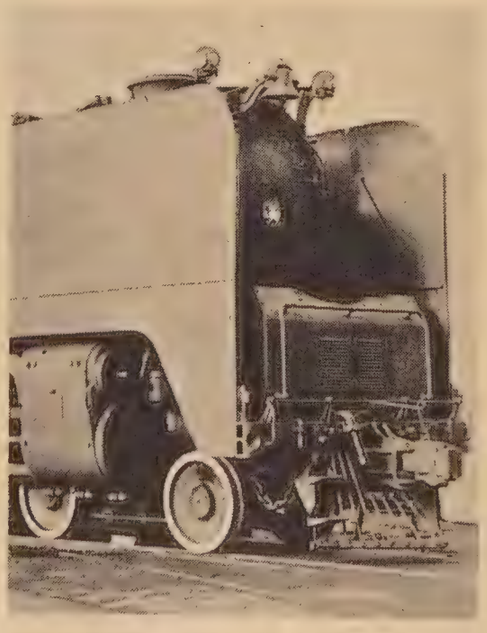
There have been many cases of trains swallowed by muskegs or destroyed by forest fires, avalanches, floods, etc., but none, to our knowledge, occurred in Kansas. Possibly some reader can tell us.

3 *How do Russia's railroads compare with those of the United States in freight volume?*

Brace yourself for a shock! Even though the U. S. railroads have three times the route mileage of the Soviet system, the latter is away out in front for traffic density and ton-miles. According to *Railway Age:* "The Russians claim—and it seems substantially factual—that the 1957 freight traffic density of the Russian lines was three times that of the U. S. In the period 1946-'50 it was less than double that of the U. S."

An observant traveler, riding the eastbound Trans-Siberian Express about 700 miles east of Moscow, kept a record of the train movements he saw for several hours. "We met 15 freight trains with a total of 738 cars," he writes in *Railway Age,* "and three passenger trains with 44 cars, and we overtook three freights with 139 cars and one passenger train with 14 cars."

The smaller-sized Soviet rail network is "out-freighting" our railroads. That is because the U.S.S.R. gives this industry the major role in transportation and traffic increases as the Soviet economy grows. It is high time for America to act decisively.



Smoke deflectors known as elephant ears were used on some steam engines of the Delaware & Hudson and other railroads.

4 *Where is the northernmost railroad bridge in North America?*

In our forty-ninth state, Alaska, 412 miles north of Seward, at latitude 64.5 north. It carries the Alaska Railroad across the Tanana River.

5 *What was the purpose of the "elephant ears" used on some steam locomotives?*

They were smoke deflectors.

6 *When were T-rails first used?*

A brig, laden with the first T-rails ever produced, arrived at the Port of Philadelphia from Wales on May 16, 1831. The rails, weighing 36 pounds to the yard, were 3½ inches high, 3¼ inches at the base, and were rolled of iron. This cargo was consigned to the Camden & Amboy (now the Pennsy). The rail was designed in 1830 by the C&A's president and chief engineer, Robert L. Stevens, son of Col. John Stevens, who built and operated America's first steam locomotive.

7 *What is a "figure-eight" in railroad terminology?*

Actually, there is no such device, but a pattern formed in chaining cars when the chain is looped in a position to resemble a figure 8.

Bill Knapke, retired SP conductor, describes it as follows: "The hook end of the chain is placed behind the shoulder of one drawbar so that about three

Steam triple-headers such as these Norfolk & Western Class M beauties are a rare sight. Photo shows railfan special at Christianburg, Va., Sept. 2, 1957. High spot of trip was twelve-wheeler (4-8-0) No. 475 looking the same as she did back in 1902.
Bud Rothaar, 757 Pierpont St., Rahway, N. J.

links and the hook are over it. Then the chain is passed under both drawbars, up and over the opposite opposing one. (At this point the cars are only a few inches apart.) As they move slowly to a coupling the slack is jerked out of the chain. When the drawbars come together the chain is passed underneath again and the hook is linked into the chain. The rest of the chain will be secured to the cars to keep it from dragging."

8 *History, please, of No. 1882, which made the Louisville & Nashville's last steam run.*

This 2-8-2, built by Brooks (Alco) in 1927, carried an unusual brass number plate, presented by an L&N pensioner born in 1882. Cylinders, 27x32 inches; diameter of drivers, 63 inches; total weight of engine, 323,000 pounds; weight on drivers, 251,000 pounds; boiler pressure, 200 pounds; tractive effort, 53,000 pounds. Leased to the Carrollton Railroad in 1956. Final run Jan. 28, 1957, with local freight from Carrollton, Ky., to DeCoursey, Ky., where she was later scrapped. (Photo in our Oct. '58 issue.)

9 *Did the Lackawanna ever have Vaulclain Compounds?*

Yes. No. 16, a 4-6-0 Mother Hubbard, built by Baldwin in 1892 with 24x24-inch cylinders and 56-inch drivers. She was rebuilt in 1895 with 20x24-inch cylinders and 63-inch drivers, and renumbered 693.

10 *What is the earliest record of a piggyback in railroading?*

In England in the 1830's, if a wealthy family wished to take a long journey, their horse-drawn coach might be placed on a flat car (or what passed for one in those days) coupled to a train. The family would ride in a first-class railway passenger car, with their horses in a baggage car, completing the journey in style in their own coach.

11 *Why were relatively few McQueen 12-wheelers ever built?*

Probably because of their inability to make high speed safely.

12 *Please publish a brief history of the Coeur d'Alene Railway & Navigation Co., in Idaho.*

Organized July 14, 1886, the company built a narrow-gage freight line to serve a mining district from Old Mission to Wardner, 15 miles; then to Wallace, 9.71 miles; to Mullan, 7.05 miles, and to the Montana line, 11.10 miles, in 1891.

The company bought the graded roadbed of Canyon Creek RR, extending from Wallace to Burke, 6.83 miles,

and laid a narrow-gage track on it, but standard-gaged this line and the Wallace-Mullen line in 1891.

Meanwhile, in '87 the company acquired the Coeur d'Alene Steam Navigation & Transportation Co., consisting of a boat line operating between Coeur d'Alene and Old Mission.

In 1888 the Northern Pacific leased the entire property, later passed through receivership, and bought it outright in 1897.

Two Moguls, numbered 1 and 2 (built by Grant about 1886) comprised the entire "fleet" of narrow-gage locomotives. After 1891 these two served only the three-foot line which remained west of Wallace until its abandonment in 1898. Then they were sold. We have no record of the purchaser. The Wallace-Old Mission line was abandoned in 1898.

13 *Was Thomas A. Edison, the inventor, a locomotive engineer?*

Yes. An old print published in our October issue shows him at the controls of an electric locomotive of his own invention. Incidentally, he posed as a steam hogger in *The Great Train Robbery,* the first narrative movie ever made, which Edison himself produced in 1903.

14 *How many Class I roads in the U. S. have living quarters in some of their depots?*

No such list is available.

Only in memory do these iron horses, Nos. 5501 (left) and 5503, continue to wheel

15 *Why doesn't the Nickel Plate Road merge with the Lackawanna?*

L. L. White, chairman of the NKP board, gives this answer: "Such a merger would not be in the best interest of shareholders. The Nickel Plate has two routes to the East, one via Buffalo, where we have connections with several railroads, including the Lackawanna; the other via the Pittsburgh & West Virginia, the Reading, the Western Maryland, and Jersey Central. We play these routes alike. We do not solicit traffic in favor of one route against another. Through neutrality, we have built up an outstanding reputation among all connecting lines, and it produces much business that would not otherwise move by the Nickel Plate."

Bubbles, the Canadian National mascot at Jaspar, Alberta, is a good railroader. She steps over the rails, never *on* them, and is teaching her four cubs to do the same.

Canadian National Railways

16 *Is there a map that shows all railroads, branch lines and discontinued lines in the U. S. or in any of the individual states?*

We don't know of any.

17 *Why did the Canadian Pacific locomotive firemen strike last May, and how was the strike settled?*

The issue was a Canadian Royal commission report which said firemen were not needed on yard or freight diesels. The railway won. Under the terms of settlement, the 2,377 CPR firemen with at least two years service retained full seniority rights in their jobs, while the 100 jobs filled by men with less than two years service were abolished. As CPR firemen are promoted, they are not replaced.

Burlington freight up the long grade to Bonneville, Wyoming, as they did years ago.
C. G. Dewey, 725 E. Seventh St., Sheridan, Wyo.

The British Railways already have one-man crews on nearly all diesel locomotives. When the issue comes up in the States, as it surely will, the Brotherhood of Locomotive Firemen and Enginemen will fight hard to retain two-man locomotive crews.

18 *What is the highest point reached by (a) a mountain-climbing railroad in eastern U. S., (b) a standard-gage road east of the Rockies, and (c) an American railroad using adhesion or smooth rails rather than cog or rack rails?*

(a) Mt. Washington (cog) Railroad in New Hampshire, 6,293 feet above sea level. (b) The Western Maryland near Spruce, W. Va., 4,067 feet. (c) Colorado & Southern at Climax, Colo., 11,309 feet.

19 *How many crossties are in a mile of railroad track?*

About 3,000.

20 *An old Southern Pacific man told me that in 1891 a heavy rainstorm washed away not only the Espee tracks and a bridge but also an entire river. Was he kidding?*

Not at all. The Espee erected a water tower at Whitewater station, Calif., taking water for steam locomotives from the Whitewater River that dashed down from the Sierra Madres, and just beyond that they built a bridge across the river. In July, '91, a long spell of torrential rain washed away just about everything that wasn't nailed down. When it finally stopped, the river stopped too.

The Espee sent out word that if Old Man River would come back, all would be forgiven. But it never did. And it was such a nice little river. The Espee was real peeved. They had to rebuild the track—and put in a new bridge, for fear the river might return—as well as lay a pipeline at much expense in order to bring water down to Whitewater station for the engines.

21 *Which North American railroad had the first 0-10-0's?*

Probably the Philadelphia & Reading. James Millholland designed and built eight of them between 1863 and '72. All but one were scrapped before 1900. In that same year old No. 177 was renumbered 1448, Class G-1A. She was scrapped in 1911.

22 *Please furnish a world-wide list of railroads that used Mastodons (4-8-0's).*

A complete list would entail many hours of research, but here is a partial one:

Central of New Jersey (Camelback)
Chicago & Eastern Ill. (Camelback)
Lehigh Valley (Camelback)
Lackawanna
Monon
Southern Pacific
Southern Pacific of Mexico
Santa Fe
Missouri Pacific
Duluth, Missabe & Iron Range
St. Louis & Southwestern
Norfolk & Western
Great Northern
Atlantic Coast Line
London & Southwestern—England
Shire Highland—South Africa
Lagos—Nigeria, West Africa
Northern Railway—Spain
Madrid, Zaragoza & Alicante—Spain

23 *Long ago, I read of a dispatcher who issued a lap order that sent two trains toward each other on a single track with no way to avert a cornfield meet. Then he called out a wrecking crew and a medical train, turned his desk over to an assistant, and killed himself. Could you identify this episode?*

No, but maybe some reader can. Peter Josserand, veteran Western Pacific train dispatcher, comments: "Although such incidents produce mental agony, I never knew of a dispatcher to commit suicide because of a mistake. It is my opinion that such a thing could happen only to a comparatively young man. Older dispatchers have had time to condition themselves to the possibility of a slipup and to predetermine a course of action in such event.

"I am familiar with one case where a 47-year-old dispatcher authorized an automobile to move into a block occupied by an opposing train. The driver of the car was not hit, but the mental strain on the dispatcher was so great that he quit his job. A doctor warned him that a heart attack or stroke might result if he went back to dispatching."

24 *Where is the world's northernmost railroad?*

In the Lapland region of Russia, 170 miles north of the Arctic Circle, where a 5-foot gage line extends north from

Howard Shottenfeld, 85-77 Chevy Chase, Jamaica, N. Y.

Last run: Baltimore & Ohio's *Capitol Limited*, westbound on Jersey Central tracks, April 26, 1958, approaches a signal bridge at the east end of the Plainfield station.

the White Sea through Kandalaska to Murmansk on Kola Bay.

25 *Do you know anything about the train that fell into the Cimarron River?*

Yes, the collapse of a bridge that connected Kingfisher with Dover, Okla., threw an entire Rock Island freight train into the water, killing 9 or 10 men. It happened Sept. 18, 1906, almost the very day the first issue of *Railroad Magazine* hit the stands. Later we published a poem on the subject, "The Lost Engine," by Blanche Mosler, daughter of a Rock Island hogger. Here it is:

It's a tawny stream and it curves along
Like a sluggiish water snake
And its sandbars reach with their yellow fangs
Where the lazy waters break.
A stranger standing upon the shore
Far back where the ground is strong
Might think the river's always at peace,
But the natives know he's wrong.

For the natives know that in long ago
On a bleak September day
The swollen current rushed pell-mell
Till it swept the bridge away.
Swiftly a passenger, roaring down
On the old Rock Island line,
Plunged in the angry Cimarron
That flowed like troubled wine.
And somewhere down in its awful depths,
The engine and coaches rolled;
And many lives were lost that day
In the quicksand's shifting gold.
And somewhere now in that glittering sand
Where the Cimarron slips by,
An engine's fast in the tricky bed,
Where the tawny waters sigh.

For nothing was ever seen again
Of the engine lost that day;
Yet there have been times, when the tide was low,
That crews who passed that way
Have thought they could see her shadow dark,
Vague, like a wavering dream,
In treacherous quicksand far below
On the floor of the lazy stream.

26 *Does the Lehigh Valley still use steam power?*

No.

27 *How many people are employed by United States railroads?*

Latest available figure for Class 1 roads, 840,321, probably the lowest in this century. The highest, 12 years ago, was about 1,400,000. We do not have figures for the short lines. The trucking interests claim to have 7,000,000 employes.

28 *Do you have a list of personal hand signals that are used confidentially among railroaders?*

Yes, a partial list. In spite of some fancy electronic gadgets used in communications, railroad men still hang on to the old hand signal—for conversations as well as moving trains. Here are a few used by employes of the Seaboard Air Line:

A bottle of catsup in the dining car galley window—the traditional warning that some brass is aboard.

Brushing hair back indicates the approach of a bald-headed superintendent. Raising arm high, palm down, for a tall superintendent. Sawing off arm with hand, a short superintendent.

One superintendent reported that he was on the scene but failed to see what must have been one of the most expressive signal communications in the Seaboard's history. He did see an engineer, slightly ruffled, swing down from his cab and head for the caboose. When the super asked where he was going the hogger replied: "Back to the crummy for a minute. That brakeman ain't going to get away with what he just called me with that lantern."

29 *What is a jumbo car?*

Any extra-large railroad car.

30 *Describe a shock-control unit?*

An appliance located in the middle of a freight car to protect lading from shocks. It consists of a movable center sill with a determined amount of travel in either direction. This is retarded by a hydraulic device consisting of a double-acting cylinder and piston contained in an outer housing which serves as a reservoir for hydraulic fluid. Since it is double-acting, impact energy from buff and draft impacts is absorbed.

Its use in conjunction with conventional high-capacity draft gears protects fragile lading at impact speeds up to 12 mph.

The Santa Fe has 100 "Shock-Control" cars in operation. They are modified conventional "DF" boxcars with floating underframes that have 10 inches of travel. Equipped with roller-bearing ride-control trucks, they are painted Indian Red with black-and-white stencilling which reads, "DF with Shock Control—Floating Underframe—Gives Freight a Smoother Roll."

31 *Why is it that marker lights on cabooses change from red to green?*

Bill Knapke explains it this way: Markers must be displayed at the rear of each train. While it is on main track, markers will show green to front and side, and red to rear. When the train is into clear on siding, to be met or passed by another train, markers will show green to front, side and rear. They must be turned again to red before returning to main track.

On double track, when a train is running against the current of traffic, the marker nearest the other main track will indicate green; the other, red. This rule applies also to a train on a siding which is part of a diverging line.

32 *In which state are the railroads taxed most heavily in proportion to their mileage?*

New Jersey, counting both state and local taxes.

33 *Please furnish data on newest equipment for icing refrigerator cars.*

The most modern machine for this purpose, recently put into service at Southern Pacific's classification yard at Eugene, Ore., is a self-propelled unit which pulls 25-foot trailers equipped with conveyor belts. They carry huge blocks of ice to a crusher, then into bunkers through hatches on top of the cars. Such an operation takes about two minutes per car.

Developed and operated by Pacific Fruit Express Co. (jointly owned by SP and Union Pacific), the machine is the first of its kind to take ice out to trains in the yard, thereby eliminating the need for switching reefers to an ice dock.

It operates on the middle pair of three sets of trucks, which enables it to service two trains—one on either side—at the same time. In addition to handling bunker icing, it is equipped to place "snow" ice in cars which use it.

A two-way radio system provides for last-minute icing instructions and other communications between the icer and its base station.

34 *Which Camelback had the biggest grate area?*

Philadelphia & Reading's 2-8-0's Nos. 1616 and 1617, Class I-8c, built in

This new mobile icing machine is speeding operations at Southern Pacific's classification yard in Eugene, Oregon. The usual method is to switch reefers over to ice dock. The new device brings ice out to cars and completes the job in about two minutes.

Southern Pacific

In the halcyon days of steam power the Canadian Pacific needed three locomotives to wheel a long passenger train up the big hill at Field, British Columbia, in the Canadian Rockies. (Note the little section car waiting beside the track at the right.)

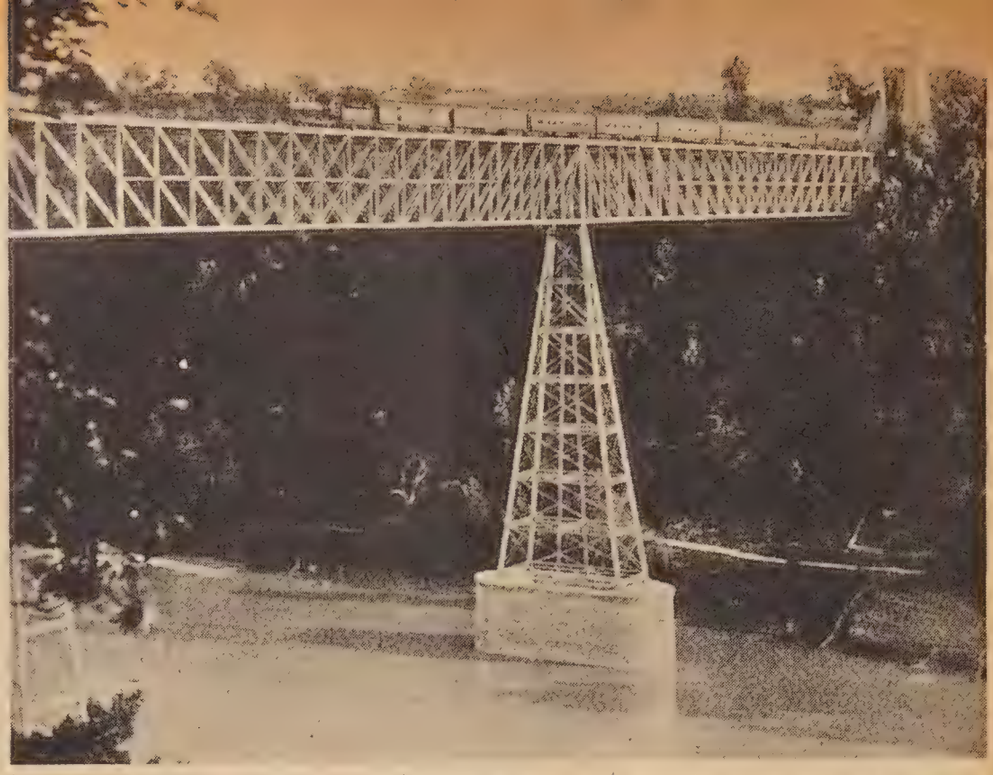
Nicholas Morant, Canadian Pacific Railway

1914. Each had a 110-square foot grate area until rebuilt to Class 1-8 SD in 1918, at which time the drivers were reduced from 61½ inches to 55½, the grate areas to 94.5 square feet, and super heaters were applied.

35 *What was famous about the Southern Railway's High Bridge?*

This 1230-foot structure, spanning the Kentucky River between Louisville and Danville, Ky., 308 feet above the water, is said to have been the highest American bridge ever built across a navigable stream. When completed in 1877 it was the only Cantilever on our continent.

It had two massive towers built by Gen. Leslie Combs, who had been an officer in the War of 1812. The original bridge was replaced in 1911 by a structure 31 feet higher, built on the same foundation, and for years the world's highest railroad bridge. The old towers stood until 1929.



Southern Railway

Two massive towers marked the approaches to High Bridge over the Kentucky River. It is said that when they were built in 1877, a bottle of whiskey was placed in each cornerstone. When the bridge was razed not even an empty bottle was found.

Running Extra

When you answer a question requested in Information Booth *or* Running Extra, *be sure to mention the item number and date of issue.*

AN ALASKAN railroad (now abandoned) interests Frank Johnson, 1032 West St., Sheldonville, Mass. The line was built around 1900 and ran from Cordova to the Kennecot Copper Mines, about 123 miles. During a visit to Alaska, Mr. Johnson learned from former employes that unique engineering problems had to be solved before the line could be completed, particularly where the rails crossed the Copper River Delta and began to climb up the valley. Who can furnish information?

JOHNNY SILLIK, Route 4, Box 436, Springfield, Mo., wants facts on Corbin Tropical Planter locomotives (April '57 *Railroad*, page 29). Where were they used in the U.S., if ever? Who can supply a photo?

DATA on old Erie Atlantic-type Camelback passenger engines in the 510-512 series is wanted by Floyd Yaple, Bath, N. Y., a former Erie fireman, who says No. 510 was reputed to be the fastest thing on the Erie around 1910.

ALFRED GALE sends the following information to answer William Peisecker's inquiry about an abandoned railroad right-of-way between Stephentown and Lebanon, N. Y., and another between Whitehall and Rutland, Vt.:

"The first one belonged to the Rutland and ran from North Bennington, Vt. to Petersburg Jct. on the Boston & Maine. From this point it followed N. Y Route 22 to Chatham, where it connected with the Boston & Albany and the New York Central's Harlem Division. For many years heavy freight from the Port of New York to Rutland and Burlington went over Central rails to Chatham, from which point Rutland engines hauled it north."

Mr. Gale has no photos or information as to equipment used, but suggests contacting the Rutland RR at Rutland, Vt.

Regarding the right-of-way that parallels the Delaware & Hudson between Rutland and Whitehall, he comments:

"Early in the last century the Rutland & Whitehall operated there, eventually merging with the Rensselaer & Saratoga. It ran from Troy to Whitehall, thence south to Eagle Bridge on the Boston & Maine. In the early 'forties it became part of the D&H, but they could give me no information on any other railroad in that district, except for several private lines that belong to marble quarries.

"About 20 years ago the D&H got out a history of its road which tells about its leased lines. If your local library does not have it, write to the D&H at The Plaza, Albany, N. Y."

"WILL some reader supply information about the little branch line of the Cincinnati, Lebanon & Northern?" asks Edgar Banks, 1800 Seventh Ave., New York City. "The line ran from Cincinnati to Lebanon and Dayton, Ohio, and was controlled by the Pennsy, although the Norfolk & Western used a small segment of it."

FACTS about the Condon, Kinzua & Southern RR. Co., requested by John Wood, are furnished by Hugh F. Stephens, 233 Trenton Blvd., Sea Girt, N. J., as follows:

Standard-gage line operated in the State of Oregon as a common carrier. Ran from Condon (where it connected with the Union Pacific) to Kinzua, 24 miles. As late as 1945 the road offered passenger service via motor car every day but Sunday.

ANSWERING Fred McKinney's request for a history of the Wabash, Bill Trudell, 1356 Aubin Rd., Windsor, Ont., suggests that he write to the Wabash RR, Railway Exchange Bldg., St. Louis, Mo., for their 18-page history of the line.

HERBERT REYNOLDS, 3430 81st St., Jackson Heights, N. Y., questions our statement regarding the first electrified main-line railroad. We said the Long Island operated the first electric train in 1905 (Item 7, June). He points out that in 1895 the Baltimore & Ohio electrified its main line in the City of Baltimore.

Both statements are correct. The difference lies in the interpretation. B&O's electric operation did predate that of the LIRR. However, it was a partial

electrification of a segment of its line, undertaken solely to permit juice engines to haul *steam-powered* trains through a tunnel under the city. The Long Island was the first U. S. railroad to launch a large-scale electrification program.

AS STATED in our August issue, (Item 3), the Reading has not made public the composition of the chemical it uses to reduce the slipping of locomotive wheels on rails, but Harry E. Hammer says that about two years ago the Reading publicized its method of applying the solution. The process is "rail conditioning." A motorized car, operated independently of trains, applies a combination of steam, water and detergents directly to the rails, thus counteracting the almost invisible oil film that makes the steel slippery.

WHO knows the words of a song which begins: "We had sixty cars of cattle and fifteen cars of beer,/ A compound engine and a simple engineer."?

O. P. SMITH, President and General Manager of the Coudersport & Port Allegany, supplies a brief history of the Okmulgee Northern and its engine No. 5 (*Tommy*), in response to request of Paul Rehn, Lima, Ohio.

This short line, an extension of the Missouri, Oklahoma & Gulf (now KO&G), was built in 1915 to haul coal from deposits nine miles to Okmulgee. Several years later the town had an oil boom, which resulted in the building of a refinery and transportation of several hundred carloads of petroleum by the ON each month. Passenger service was provided between Okmulgee and Henryetta, with gas-electric cars making three round trips a day. But this service ended when a highway was built and the gas cars were sold.

In 1932 Phillips Petroleum Co. acquired the line. A year later they bought a new engine, No. 5, a Consolidation, from Alco—at a low price because of the depression. She was the only locomotive sold that year!

No. 5 was named *Tommy* for Thomas M. Pierce, one-time president of the line. A few years later another Consolidation (No. 6), was purchased, and named *Charley* for Charles M. Musgrave, Traffic Manager of the Phillips Company.

Later the ON acquired a 70-ton diesel unit from General Electric. No. 6 was sold but *Tommy* remained as standby power until she was scrapped in 1957. Today the ON is still operating successfully.

WANTED by Robert Decker, 226 17th Ave., Moline, Ill., data on the cost of installing a steam locomotive on permanent display in a city park.

HUGH STEPHENS suggests the following sources of information on World War I armored trains for use in building a model: Chief of Signal Corp., Dept. of the Army, Pentagon, Washington, D. C. Request list of photos. For data, inquire Chief Archivist (or Chief Historian) Dept. of the Army, also in the Pentagon. If no luck with the above, write to Chief Archivist, National Archives, or Superintendent of Documents, Government Printing Office, both at Washington.

Canadian National Railways

Canadian National uses this type of tripod telegraph pole on the northern division of its Hudson Bay Railway, because severe weather would fell ordinary poles.

Reading Company

The Reading's rail adhesion car, No. 1000, is used on the mountainous Catawissa branch in East Central Pennsylvania to apply a chemical that makes rails less slick.

REFERRING to stock cars (Item 13, Aug.), Andrew J. (Carload Andy) Ospring, 1322 N. Ontario, Burbank, Calif., points out that mixed livestock is not shipped in partitioned cars but in double-deckers.

BALL SIGNALS: David Neelon, 244 Florence Rd., Waltham, Mass., cites locations in New Hampshire where this old device is still used: Nashua, Union Station; Concord, one at diamond crossing, one at train shed; Berlin, north yard, diamond crossing, junction with Berlin Mills Ry.

"WHO can tell me anything about the Anthony & Northern in southwestern Kansas or the now-abandoned Kansas City Northwestern which ran from Kansas City, Kan., to Virginia, Neb.?" asks Lloyd Hendricks, 402 W. Illinois St., Urbana, Ill.

CORPORATE history of the New Mexico Central is desired by Richard Clark, Cedar Crest, N. M., who says the road was incorporated as the Santa Fe Central in 1900 and ran from Torrence to Santa Fe, N. M. Can anyone furnish specifications of its engines? ●

Halstead station of Chicago's new West Side Subway, opened last June. Note overhead sign, controlled by switch in agent's booth, indicating which trains leave from each side of platform and if fares are paid on train or in station at agent's window.

Steve Maguire's

TRANSIT TOPICS

THE NEW Congress Street electric rail line of the Chicago Transit Authority is now operating in the median strip of the Congress Expressway. It was opened June 22, when the old El portion of the route known as the Garfield Park line was abandoned.

Steve Maguire

This is the first example of mass rapid-transit facilities built as part of a new superhighway. It represents the first use of highway and other public funds to provide mass transit instead of concentrating solely on a motor road. When the land destined for the route was acquired, the city, county, and state made sure it would include a right-of-way for an open-cut transit line in between the motor lanes.

While the old Garfield Park line was not heavily traveled, it is interesting to note that additional passenger traffic is being drawn to the new, fast, rail line. This factor will help to determine whether or not CTA will build other such lines in freeways. The innovation is being watched by traffic officials.

In the dark early morning of the day before Congress Expressway opened, buses replacing the Wentworth streetcars ended Chicago's last trolley operation. And on June 22nd, only 18 hours after the Chicago abandonment, the entire state surrendered to buses.

The final passenger trolley run in Illinois was over the local line of the Illinois Terminal Railroad from Granite City into St. Louis, reports David Neubauer, 8740 Susan Ave., St. Louis, Mo. (The ITRR abandoned its long interurban run years ago.) In use at the end were ITRR city car 410 and 470-473 and PCC's 450-457. The latter are double-ended MU's and will likely find a ready buyer overseas.

In 1853 a horse-drawn omnibus rattling over Chicago streets gave the city its first mass transportation. A horse-car rail line followed in 1859, then cable-cars in '82. Chicago became one of the largest cable-car operators until electric cars appeared in 1890. In 1912 the last cable line quit.

A cobweb of trolley lines covered Chicago until 25 years ago, with nearly 4000 cars and more than 1000 miles of track. Today the cars are gone. None are extant except a few historic specimens, in excellent condition, housed in trolley museums and CTA's old barns.

CITING steady losses over the years, the Chicago, North Shore & Milwaukee Ry., one of the very few interurban lines operating in America, is asking permission to abandon its entire system, including the fast Chicago-Milwaukee run and the Mundelein branch.

President Charles Leonard says gloomily, "Even if someone were to get this railroad as a gift he couldn't make it pay." He adds that the CNS&M will be asked to fork up about a million dollars for the cost of certain street and bridge improvements now being made in Mailwaukee, not to mention the expense of repaving the streets over which it operates. Our news comes from several readers, including Alex Darragh, 1314 Bedford Rd., Grosse Pointe Park, Mich., and Andrew Koval, 8018 Muskegon Ave., Chicago, Ill.

"News of the abandonment proceedings," says Mr. Koval, "has stirred the communities along the line into a frenzy. The management is in for a fight."

We hope some way can be found to save this famous electric line, if only for the 7,500 commuters who use it daily. Someone suggested that the Chicago Transit Authority take over, but what about that part of the line whicht operates in Wisconsin?

DE LUXE service on the New York subway, Independent Division and Rockaway Division was put into effect last summer between the 42nd Street station, Manhattan, and Rockaway Beach. The special once-a-day non-stop run was a real novelty in subway travel. Not only did the train have a loudspeaker system through which announcements and music were piped but seats were guaranteed to all passengers. When the number of tickets sold exceeded the

Philadelphia Transportation Co. crew dug out rails of long-unused second track at Willow Grove station last June 6th while modern PCC's were still carrying passengers. Two days later, in early morning, buses permanently replaced the trolley cars.
Neil Shankweiler, 387 W. Oakland Ave., Doylestown, Pa.

number of seats, cars were added to the train to take care of everyone.

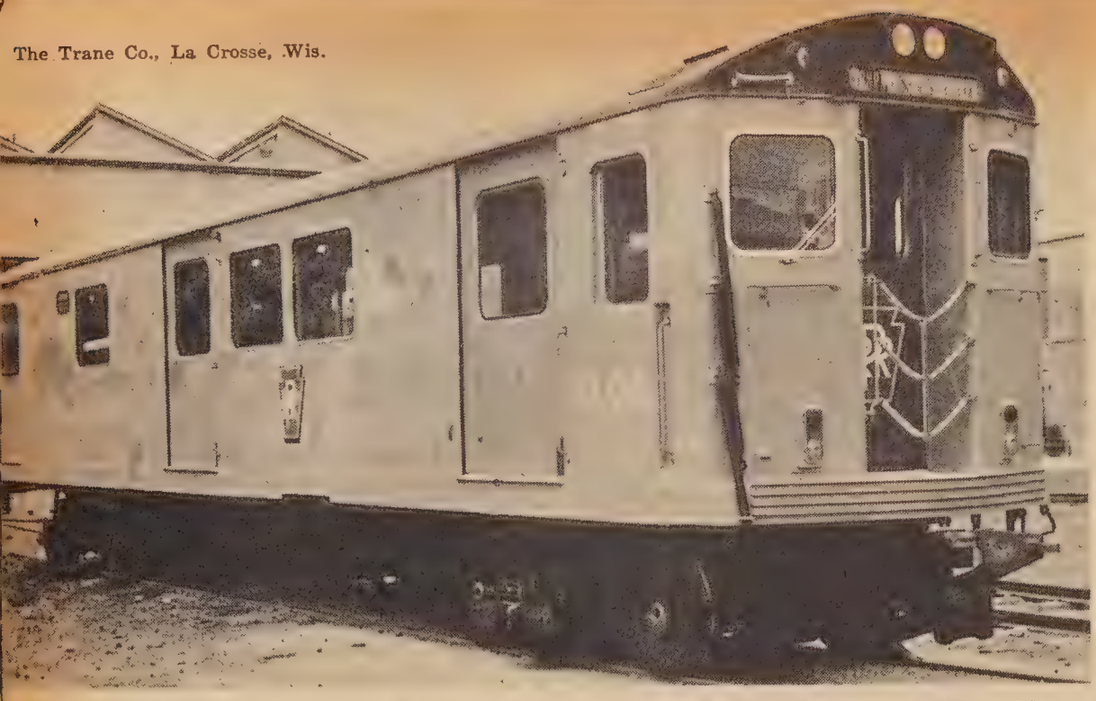
The first trip was especially gala. A scent of apple blossoms filled the air. Pretty girls hired by the New York City Transit Authority sprayed the cars with fragrant deodorant as passengers got aboard, and a clown known as Jazzbo was assigned to the opening run to amuse the children. The train makes a beautiful scenic run over the long Jamaica Bay trestle that used to be part of the Long Island Rail Road.

Hudson & Manhattan RR. passengers are now riding in air-conditioned ease. This innovation went into effect July 9th for the first time in the tubes between downtown New York City and Newark, N. J. when new rapid-transit cars went into service. Your *Transit Topics* editor joined Governor Meyner of New Jersey and other officials in a ceremony heralding the event. Public use of these cars began July 10th with a six-car train making regular trips. Additional cars were added to the run, replacing nearly all of the drab-looking, old, maroon cars that had been polishing the rails for up to 47 years.

The new cars, bought for $4,300,000 jointly by H&M and the Pennsylvania Railroad (over whose tracks it operates between Jersey City and Newark), were built by St. Louis Car Co. along PCC lines. All have Trane air-conditioning, which circulates fresh air at all times, and in summer ejects a sheet of cooled air across the doorways.

These cars ride remarkably well at

The Trane Co., La Crosse, Wis.



Each of 50 new Hudson & Manhattan air-conditioned cars bears a PRR emblem.

high speed. They do not "rock and roll" like the old ones did at speeds of well over 60 mph, and their modern soundproofing shuts out both exterior noise and the unfragrant smell of the Jersey meadows. Such advantages are sure to win back at least a few of the commuters who had taken to highways.

This year was picked to introduce the new cars because it's the 50th year of H&M operation. Our H&M story in the Nov. '47 *Railroad Magazine* pointed out that on Feb. 25, 1908, H&M trains began running between 19th Street, New York, and Hoboken, N. J.

The line is bankrupt. Its new equipment was contracted for, with Pennsy approval, before the disastrous strike a year ago which cut sharply the volume of riders. H&M hauls no freight. As the only direct rail route between New Jersey and downtown New York it is irreplaceable but is operating at a loss. Apparently the only solution—as with many other good rapid-transit roads bedeviled by subsidized rubber-tired competition—is subsidization by the area it serves. The public may soon have to choose between that or abandonment.

HOW freeways are failing to solve the traffic problem is pointed out by *Mass Transportation*. J. F. Collins Moore of Philadelphia, Pa., sends us an excerpt from that magazine:

"It is a grim joke to hear folks in the Freeway Capital of the World (Los Angeles) talk about their freeway de-emphasis program. In the press and on the air, L. A. officials are urging motorists to try an alternate route home tonight. 'Don't use the freeways during rush hours,' they implore.

"We tried the Hollywood Freeway one day last month during the rush hour in an *express* (and we use the term loosely) bus and we found why the de-emphasis program is on. The freeway was so choked with autos that the express bus just inched along."

NEW city code of Houston, Texas, contains a provision making it unlawful for streetcars to make unnecessary noise. Since Houston hasn't had a real streetcar in 20 years and not even an interurban (Houston North Shore) in 10 years, we can't figure it out.

FORMER Pacific Electric cars of the new Los Angeles Metropolitan Transit Authority are being renumbered, according to *The Western Railroader*, P. O. Box 668, San Mateo, Calif. All former Interurban Electric and Northwestern Pacific cars of the 300 and 400 series now running (except the 450's) become 1500-1547 of the LAMTA, while the 450-457 and 459 become 1700-1708.

The center-door cars of 5100 series on the Watts local line become 1800-1815, while work cars 00161 and 00164 receive numbers 9223 and 9224.

We recommend *The Western Railroader* to fans interested in West Coast activities. Ten issues for a dollar. Each issue contains an illustrated trolley or steam-road feature.

SAN FRANCISCO trolley lines are now being operated with one-man PCC's. Last May 9th marked the final day for the old "iron monsters" (standard two-man trolleys) on the Municipal Railway. The graveyard run of No. 181 from the East Bay terminal adong the El line to 35th Avenue carried commuters and members of the Electric Railroaders' Association.

TWO trolley-museum groups have set up shop in a field on Blue Anchor Road, Tansboro, N. J., where four ex-Philadelphia streetcars are now stored for the purpose of eventually creating an operating museum.

Owner of the land and one of the trolleys, PTC car 5025, is Al Roth, who lives at the location. Other cars on hand are 8532, owned by Ernie Armstrong, and 8042 and 5327 of the Metropolitan Philadelphia Railway Association.

This fan group is working with one known as the Delaware Valley Short Line to build a carbarn. Each will project track out of the common terminal in opposite directions, with the DVSL being standard-gage and the MPRA being dual gage so that PTC wide-gage cars as well as standard-gage equipment can be operated.

There are plans to buy several miles of right-of-way.

In an effort to obtain funds, MPRA is selling a complete list of all Philadelphia trolley lines ever operated (some lasted one summer only) for one dollar, sent to Harold Cox, 8217 Pickering St., Philadelphia 50, Pa. With a current map of PTC lines the price is $1.30. Incidentally, the joint museum project is located in Camden County, N. J., on Blue Anchor Road 571, about one mile east of the junction of route 73.

SALE of the entire 69th Street Terminal of the Philadelphia Transportation Co. to the Philadelphia Suburban Transportation Co. (except for the subway yard facilities) may turn out to be part of PST plans to abandon all four trolley routes out of 69th Street but not the Norristown third-rail line. PST may renovate the terminal to serve only its bus routes.

CLEVELAND may purchase the Terminal building in that city in connection with swift extension of its rapid-transit service to such outlying areas as Euclid, Rocky River, Bay Village, Berea and the Miles Avenue area, reports Theo. P. Taetsch, 14218 Garfield Ave., Lakewood, Ohio.

This plan has the backing of Mayor Celebrezze and other city officials. It would utilize the tracks of the Erie,

New York Central and Nickel Plate Railroads to carry the cars to outlying points and would convert the Terminal building into a convention center.

Meanwhile, work on the west side extension of the present rapid-transit line nears completion, with stone ballast and overhead caterary on steel poles. The only "Toonerville" touch is the line car, but our informant believes CTS will buy a work car from the Pittsburgh Railways. One new piece of equipment we recently observed on the line is a former Milwaukee sweeper, now No. 0137, rebuilt to a snowplow. It is equipped with both pantagraph and trolley pole.

Mr. Taetsch has about 36 views of construction of the new rapid-transit extension to sell or swap for other juilce photos.

SHAKER HEIGHTS City Council has authorized the purchase of ten cars from St. Louis Public Service to replace the last old-type Cleveland Railways equipment on the line. These cars will receive MU equipment but will not, as previously indicated, be coupled into permanent pairs.

FROM Joe Galloway of Toledo we learn that the Chicago, Aurora & Elgin has withdrawn its petition to abandon freight service. The road now wants to stay in business pending studies on how it can resume passenger service. Since the line hauls very little freight and since its owners are determined to scrapping it to sell the valuable right-of-way for building lots in a growing suburban area, we just cannot understand this latest gambit. Perhaps some reader can explain.

RE-ESTABLISHMENT of the old Long Island Railroaders Club is sought by Walter Broschart, 132 E. Marie St., Hicksville, N. Y. Walter belonged to the club until 1944, when the war and a resultant lack of interest among members led to its abandonment. He would like to hear from residents of Long Island who are interested.

SYDNEY, Australia, is losing some six more lines, those runing along George Street, we are told by Robert Young, Box 2266, G.P.O., Sydney. This reduces the number of cars operated in the city to about 250, as compared with 1500 in 1945. On the other hand, the New South Wales Government Railway will electrify a five-mile iner suburban line from Clyde to Carlingford as part of its plan for electrification of all lines in the Sydney area.

A FAST round trip over the Long Island Rail Road in RDC cars between Jamaica and picturesque Greenport is promised for Sunday, October 5th, under auspices of the Transit Improvement Association, Everett White, chairman, 481 12th Street, Brooklyn 15, N. Y. This group operates a trolley museum on Staten Island and in Brooklyn and Manhattan.

Total running time of regular LIRR trains is about three hours but the fan special will try to cut that time in half. Leaves Hunters Point Avenue station, Long Island City, at 9:45 a.m., and Jamaica at 10:20 a.m. Fare, $6. Proceeds from the trip will go toward removing Queensboro Bridge car 601 onto the B&O trackage in St. George, Staten Island, where two of the museum's trolleys are already located. ●

The Pennsy's only one-car MU train, car 631, stops at Jamesburg, N. J., on its short run from Perth Amboy.

Philadephia Transport Co. sweeper No. C124 reopens track on North 13th St., Philadelphia, last February 17th.

Cleveland Transit System No. 0137 at Windermere shops is ex-Milwaukee sweeper converted to RT power use.

Four photos on this page by Steve Maguire, 1411 River Rd., Belmar, N. J.

Shaker Heights Rapid Transit train, seen last May, consisted of old Cleveland Railways cars since replaced by equipment from St. Louis Public Service.

Railroaders Don't Celebrate

Christmas Eve Was Gloomy; Mismanagement Had Nearly Wrecked the Prairie Central and Now a Blizzard Threatened to Finish the Job

by Harry Bedwell

A RAILROAD classic, originally titled "Christmas Comes to the Prairie Central," copyright 1942 by Popular Publications, Inc.

THE GRAY BOWL of the sky had shut down over the Oberlin Yard. Snow fell in big flakes, covering the rails and gaunt ties and dark ballast. It washed the sprawling roof of the huge red station, with division headquarters above stairs. It turned the rolling stock along the sidings into links of long white chains. The night air was tight. You could feel a sullen pressure as the wind gathered for a frontal attack.

Eddie Sand, slim and light-stepping, came up the station platform on his way to the dispatcher's office. A boomer telegraph operator with red hair and a ready smile and greenish eyes, he'd probably drift on as soon as he became restless again. Right now he felt good.

Beside him loped a lanky brakeman, Hi Wheeler, who'd been his comrade in many adventures. Hi's sheepskin coat was belted tight about his middle and his face cracked an impish grin.

"I'll bet you get me somethin' nice for Christmas," he said blandly.

Eddie shrugged. "Sure, it's Christmas Eve. So what? Railroaders don't celebrate Christmas. It's just another work day."

"Not for me it ain't."

Eddie pointed out that the Prairie Central this season could hardly be called merry. A group of bankers had mismanaged it to the verge of bankruptcy. Before the year ended it was likely to be in the clutches of the rival Big Six Line and maybe kicked into the ashcan.

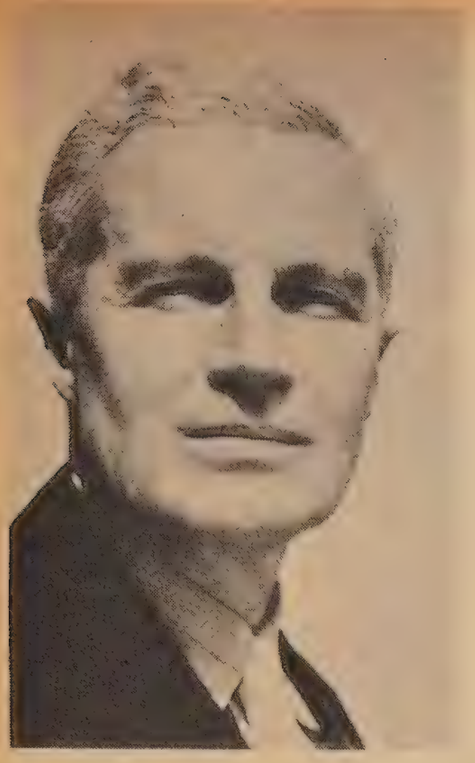
"Besides," he added, "I forgot to buy you a stick of peppermint candy."

Hi tucked his thin nose inside his coat collar as the wind whipped snowflakes into his face. "Mebbe," he gloated, "you're annoyed 'cause I got a date with Sally tonight."

"Could be," said Eddie.

He and the brakeman had been feuding over a shapely blonde with blue eyes and easy ways who worked in the Bon Ton's millinery department. Eddie's schedule didn't permit him to step out with Sally or any other girl except on his days off, while Hi was mostly riding freights or laying over at the other end of the division, so their rivalry had been sporadic.

Now Hi had maneuvered himself into a choice spot. He'd been called to flag a light engine down to Hugo, a few miles east, and to help train No. 33 up the hump, and on his way back to the city he would act as swing man. Thirty-three was a hotshot, due at Oberlin in the middle of the evening and usually on time, which gave Hi the break he wanted.



I'd like to give this to my fellow men...

while I am still able to help!

I was young once, as you may be—today I am older. Not too old to enjoy the fruits of my work, but older in the sense of being wiser. And once I was poor, desperately poor. Today almost any man can stretch his income to make ends meet. Today, there are few who hunger for bread and shelter. But in my youth I knew the pinch of poverty; the emptiness of hunger; the cold stare of the creditor who would not take excuses for money. Today, all that is past. And behind my city house, my summer home, my Cadillacs, my Winter-long vacations and my sense of independence—behind all the wealth of cash and deep inner satisfaction that I enjoy—there is one simple secret. It is this secret that I would like to impart to you. If you are satisfied with a humdrum life of service to another master, turn this page now—read no more. If you are interested in a fuller life, free from bosses, free from worries, free from fears, read further. This message may be meant for you.

By Victor B. Mason

I am printing my message in a magazine. It may come to the attention of thousands of eyes. But of all those thousands, only a few will have the vision to understand. Many may read; but of a thousand only you may have the intuition, the sensitivity, to understand that what I am writing may be intended for you—may be the tide that shapes your destiny, which, taken at the crest, carries you to levels of independence beyond the dreams of avarice.

Don't misunderstand me. There is no mysticism in this. I am not speaking of occult things; of innumerable laws of nature that will sweep you to success without effort on your part. That sort of talk is *rubbish!* And anyone who tries to tell you that you can *think* your way to riches without effort is a false friend. I am too much of a realist for that. And I hope you are.

I hope you are the kind of man—if you have read this far—who knows that anything worthwhile has to be *earned!* I hope you have learned that there is no reward without effort. If you have learned this, then you may be ready to take the next step in the development of your karma—you may be ready to learn and use the secret I have to impart.

I Have All The Money I Need

In my own life I have gone beyond the need of money. I have it. I have gone beyond the need of gain. I have two businesses that pay me an income well above any amount I have need for. And, in addition, I have the satisfaction—the deep satisfaction—of knowing that I have put more than three hundred other men in businesses of their own. Since I have no need for money, the greatest satisfaction I get from life, is sharing my secret of personal independence with others—seeing them achieve the same heights of happiness that have come into my own life.

Please don't misunderstand this statement. I am not a philanthropist. I believe that charity is something that no proud man will accept. I have never seen a man who was worth his salt who would accept something for nothing. I have never met a highly successful man whom the world respected who did not sacrifice something to gain his position. And, unless you are willing to make at least half the effort, I'm not interested in giving you a "leg up" to the achievement of your goal. Frankly, I'm going to charge you something for the secret I give you. Not a lot—but enough to make me believe that you are a little above the fellows who merely "wish" for success and are not willing to sacrifice something to get it.

A Fascinating and Peculiar Business

I have a business that is peculiar—one of my businesses. The unusual thing about it is that it is needed in every little community throughout this country. But it is a business that will never be invaded by the "big fellows". It has to be handled on a local basis. No giant octopus can ever gobble up the whole thing. No big combine is ever going to destroy it. It is essentially a "one man" business that can be operated without outside help. It is a business that is good summer and winter. It is a business that is growing each year. And, it is a business that can be started on an investment so small that it is within the reach of anyone who has a television set. But it has nothing to do with television.

This business has another peculiarity. It can be started at home in spare time. No risk to present job. No risk to present income. And no need to let anyone else know you are "on your own". It can be run as a spare time business for extra money. Or, as it grows to the point where it is paying more than your present salary, it can be expanded into a full time business—overnight. It can give you a sense of personal independence that will free you forever from the fear of lay-off, loss of job, depressions, or economic reverses.

Are You Mechanically Inclined?

While the operation of this business is partly automatic, it won't run itself. If you are to use it as a stepping stone to independence, you must be able to work with your hands, use such tools as hammer and screw driver, and enjoy getting into a pair of blue jeans and rolling up your sleeves. But two hours a day of manual work will keep your "factory" running 24 hours turning out a product that has a steady and ready sale in every community. A half dollar spent for raw materials can bring you six dollars in cash—six times a day.

In this message I'm not going to try to tell you the entire story. There is not enough space on this page. And, I am not going to ask you to spend a penny now to learn the secret. I'll send you all the information, free. If you are interested in becoming independent, in becoming your own boss, in knowing the sweet fruits of success as I know them, send me your name. That's all. Just your name. I won't ask you for a penny. I'll send you all the information about one of the most fascinating businesses you can imagine. With these facts, you will make your own investigation. You will check up on conditions in your neighborhood. You will weigh and analyze the whole proposition. Then, and then only, if you decide to take the next step, I'll allow you to invest $15.00. And even then, if you decide that your fifteen dollars has been badly invested I'll return it to you. Don't hesitate to send your name. I have no salesmen. I will merely write you a long letter and send you complete facts about the business I have found to be so successful. After that, you make the decisions.

Does Happiness Hang on Your Decision?

Don't put this off. It may be a coincidence that you are reading these words right now. Or, it may be a matter that is more deeply connected with your destiny than either of us can say. There is only one thing certain: If you have read this far you are interested in the kind of independence I enjoy. And if that is true, then you must take the next step. No coupon on this advertisement. If you don't think enough of your future happiness and prosperity to write your name on a postcard and mail it to me, forget the whole thing. But if you think there is a destiny that shapes men's lives, send your name now. What I send you may convince you of the truth of this proverb. And what I send you will not cost a penny, now or at any other time.

VICTOR B. MASON
1512 Jarvis Ave., Suite M-7-M
CHICAGO 26, ILLINOIS

The wind was rising. A switch engine shoved a train of day coaches, No. 18, under the long, glass-roofed sheds. George Nelson, her brakeman, came out of the station and stood beside them as he buttoned his dark blue overcoat.

"Mr. Nickerson's Special is headed back this way," he said gloomily, "but there ain't no word that he's taken over the Prairie Central." He looked as if he hoped they'd deny this. "Guess the old boy didn't want us badly enough to buy. Well, if the Big Six gets us—"

He ran an index finger around his throat from ear to ear and walked over to his train.

INSIDE the waiting room a bulging stove glowed red. They'd put two extra coaches on 18 for the holiday rush. Passengers streamed across the platform through the curtain of sliding flakes. They carried bundles with the bright expectancy of Yuletide and greeted George Nelson as he stood by the step helping women and children.

The conductor was Dan Cadagan. He came from the trainmen's room. His broad face had the same worried expression that haunted other Prairie Central employes these days, but he smiled at Eddie and Hi.

"If you boys have time and no better place to go," the skipper invited, "stop by and see the missus tonight. She'll have a drop of Christmas cheer for you and mebbe a bite to eat."

"Thanks," said Eddie. "I might."

Eddie would be "on the sheet" in the dispatcher's office upstairs—second trick, four o'clock till midnight.

"It's too bad," Hi said gleefully, "that you got to work for a livin'. I'll be back soon on 33 and then me and Sally'll do things. Pretty soft!"

Hi drifted into the whirling flakes, his cap canted at a rakish angle.

EDDIE turned up the stairs. He'd come down to the depot early to relieve the first-trick man who had sent him an urgent plea to sit in an hour ahead of time so he could do some neglected holiday shopping. Telegraph instruments chattered as he opened the door to the dispatcher's room. Smells of the glowing coal stove, tobacco smoke, and wet batteries fanned his face.

Hank Carter, the chief, had his feet on his table while Perry Walker, the night chief, also on the job early, leaned over a file of correspondence, turning the sheets with quick fingers. Carter nodded lazily at Eddie.

"Here's one rail that don't believe in Santa Claus," he said.

At that moment Pat Donby, wiry superintendent of the Oberlin Division, pushed open the door and glared at Carter's easy but graceless posture. It angered him, but Mr. Donby held his tongue. Carter wasn't a man to be abused. So he merely said, "I don't want that Special held up one damn minute."

"If she should get laid out," Carter drawled, "it'll be in the Smoky Hills cuts with the snow all wound up."

Mr. Donby snorted.

"It occurs to me," he said, "that perhaps Mr. Nickerson hasn't decided yet whether or not he will take over this road, but he might be influenced favorably if we handle his Special promptly and efficiently, even in this weather."

With that he went out abruptly and slammed the door.

"He's sure straining his guts to get old Salt and Molasses over the division," Carter decided with a yawn.

The chief dispatcher eyed the boomer skeptically. Eddie had worked for him over on the Burlington three years before and the two men understood each other.

"Old S.A.M. Nickerson kind of sneaked up on us," he went on. "Donby didn't have time to anticipate it with his usual anxiety and preparation. He's been in this office nineteen times since he heard—Oh, Lord!"

The door blew open and Donby stamped in again. "Where do you figure the Special will catch up with Number 33?" he demanded.

Just then the west-end trick dispatcher waved an arm from behind his low glass partition. Walker, the night chief, reached across the table and thumbed a switch. The chief's sounder fluttered into life. It chattered dispassionately of disaster. Walker leaned over a pad of clip and wrote down the message for Mr. Donby, who didn't know Morse.

Carter listened comfortably without lowering his feet. He had seen just about everything that could possibly happen on an iron pike. Nothing new remained to raise his blood pressure.

Eddie caught the crisp phrases that flickered from the brass tongue. A freight train had four cars on the ground and several rail-length of track torn up at Milepost 142, west of Elgin. The conductor gave his reckonings of the derailment from the Elgin telegraph station.

SUPERINTENDENT Donby then reached for a telephone as the night chief's pen looped the story. He got the round house, and within ten seconds the shop whistle was blasting above the howl of the storm.

Carter squared himself at his table and called the yard office on the other phone. The super was switched to the division superintendent's office. Carter told the wire chief to break out a portable telegraph set and send an operator along to cut in at the wreck.

The super was trying to do several things at once, his mind jumping ahead in an effort to clear up the trouble with his imagination.

"Eddie," he said, biting off his words, "this is going to be a tough session tonight. We've got a snowstorm and holiday traffic and Mr. Nickerson's Special." For a moment he listened on the phone. "And a derailment. You're pretty young and we'd better hold over the first-trick you haven't been here long. Maybe we'd better hold over the first-trick man to help you get straight."

Mr. Donby lacked the experience that would have seasoned him to all the kinds of crises that operating men encounter.

"That's up to you," Eddie said icily.

"What do you think, Carter?" the superintendent snapped. "If anything should happen to that Special—"

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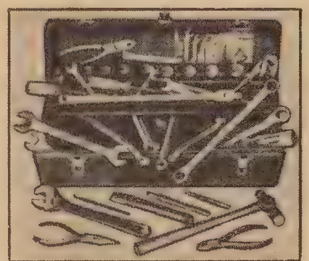

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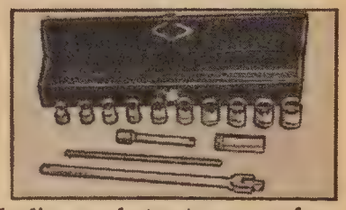

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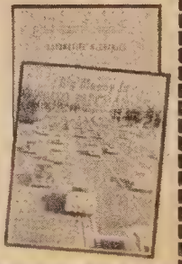

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"Eddie can handle it." The chief spoke glumly as if the admission hurt him.

Mr. Donby checked his resources. One trainmaster was over on the west end, out of range, while the other was in a hospital threatened with pneumonia. The brass collar swore fluently. He tried to think fast. In that confusion Crawford transferred the east end to Eddie and then sneaked downstairs.

"I'll have to go out there to the wreck myself," Donby told the chief, "and I guess you'd better go along as acting trainmaster. I want to get back here by the time the Special gets in from the east, but you'll have to stay out there and start the trains rolling when the wreck is cleaned up and some track laid."

Carter uttered a bleak "Okay." Then he got up and waved the night chief into his chair.

"My wife," he gloomed, "is giving a Christmas tree for the neighborhood and I was to be Santa Claus. You," he instructed Walker, "call her up and explain what happened. I ain't got the heart."

Slamming up the receiver, Mr. Donby glanced about the room and spied Eddie at the dispatcher's table.

"Where's Crawford?" he asked.

"Shopping," said the boomer.

Mr. Donby focused his bright eyes first on Eddie and then on the chief's table. He didn't like it, leaving these two men here to watch over the east end and the Special. Everything was going wrong tonight. Disaster had swooped on him out of the storm when he'd wanted the division to run smoothly, at least till Mr. Nickerson was over it.

"I'll be in touch with you on the wire all the time," he said ominously, "so don't go out on a limb without consulting me."

Thrusting his hands into his pocket, the worried official made for the door.

"Put the rotary on the 4-spot to clean out the Smoky Hill cuts," he called back. "Then send her back to the west end, where we'll be needing her. That should clear the way for the Special."

Mr. Donby was trying to outguess the storm. He plunged out the doorway, heading for his own office.

Carter growled. "He's probably got some brains—if he'd stand still long enough to use 'em."

"Yeah," said Eddie. "He should put his feet up on the table once in a while and relax."

Carter lumbered to the door, headed for the station restaurant to fortify himself with food and coffee.

THE MEN of the Prairie Central were mostly home guards. They had known the road in the happy days when it was a going concern and fine to work for. Then a slick outfit had acquired it. There were too many bonds, too much water, and nobody knew where he stood. They'd lost a lot of business.

Lately, the Big Six Lines that paralleled the PC had been trying to take over and make a branch out of it. If they did, there wouldn't be many PC jobs left, maybe some local freight runs and a couple of local passengers. All through business would be diverted to the Big Six. It wasn't a bright holiday outlook.

But there were rumors that S. A. M. Nickerson, who'd made a railroad of the Anaconda Short Line out there in the mountains, was bidding for the Prairie Central against the Big Six. He wanted it for a connecting link with his ASL. If he got it, there could be good times again.

Mr. Nickerson, whose initials became "Salt and Molasses," was regarded as a tough old pirate but a good man to work for. He never took over a railroad for the purpose of milking it dry. Eddie Sand had been pounding brass for the Anaconda under Nickerson and he knew that when the old fellow really wanted anything it was not easy to head him off.

But did he want the Prairie Central? A lot of people wondered on that storm-ridden Christmas Eve. Mr. Nickerson had inspected the property from his Special while en route to Chicago for negotiations and he was now returning west. No official statement revealed the outcome of that meeting but the newspapers hinted freely that S.A.M. was not exactly pleased with what he had seen of the PC. In fact, he had made one or two caustic remarks.

That was Salt and Molasses all over, Eddie recalled with a chuckle. The financier didn't care much for big brains, said he could buy them by the gross. But he did like men who stood firm under pressure.

Eddie slid out of his coat, put on his eyeshade, and settled in the swivel chair before the dispatcher's table. The crisp chatter of racing sounders stepped up your pulse. They babbled now of trains struggling out there in the snow.

Snug and warm under the cone of light, he directed them through the harsh elements, ranging his district like a flitting ghost. The wrecker pulled out of the west end of the yard, and the work train followed. The operator at Blair flipped the dispatcher's call, and Eddie answered.

"31—No. 60 to C & E ex 3838 E Sig Wilmar," the operator droned.

The boomer's eye raked the sheet as he sent, "Comp 3.32 p.m.," which put the 31 order into effect. And then he asked, "Did Conductor Wilmar ride his engine over?"

"Yes," Blair shot back.

Good old Wilmar! The skipper of a long drag, he'd had a hunch that the dispatcher would have to change a meet here, and he'd ridden his engine over from Norman so as to be able to drop off at the station at Blair and save time picking up the order. The Prairie Central had many such dependable old heads. It'd be a shame to bust up the organization.

WIND shook the old station. The storm was eating into the schedules. No. 34 had to double Smoky Hill in the face of first 19, stabbing the passenger train twelve minutes. Even as Eddie Sand rearranged those threading lines of traffic, the image ran through his mind of 34's brakeman out there in the lonely white gale, flagging.

The west-end trick man facing him on the other side of the glass parti-

tion couldn't do much till the wreck was cleared. Just get the big hook and the work train there fast, then mostly sit and wait till the jam broke and started the rush.

In rapid succession Eddie called the operators on his end all along the line for another weather report. The storm was lashing Smoky Hill, but farther east it seemed to fade. He gave the night chief the report.

Walker studied it. "Brass hats pick the worst time to clutter up the paying schedules with their specials," he grumbled.

The skipper of 37 reported from Quincy, where he'd been switching, that an empty gondola car had ridden a choked switch and got a pair of trucks on the ground. It'd likely take forty minutes to get her back on the iron again with a rerailer. There was a lull.

Funny how you kept running into men and officials you'd worked with before, Eddie reflected. But maybe it wasn't so strange, considering how much territory you covered on the boomer trail. For example, Mr. Nickerson, who was now slamming across the Prairie Central. Eddie had handled a certain situation for him on the Anaconda Short Line and the old pirate had written a nice little note about it. Pretty soon, no doubt, the two of them would be meeting again.

The conductor of a blade plow working Smoky Hill reported from Virgil that the cuts were drifting badly in the high wind. He'd had to back up twice and take a header into them to clear the way for 72. They were getting more than he could manage. No. 72 had kept right behind him, else she'd likely have stalled in there.

Eddie called across the desk to Walker: "We'd better send the rotary out now, instead of waiting to tie her onto the head end of the 4-spot. Those Smoky Hill cuts are getting too much for the blade."

Walker puckered his brow. "Mr. Donby said to put her on the 4-spot."

"Okay," Eddie agreed.

"Hey, wait!" said the night chief.

He had remembered Carter's warning that Eddie propositioned only once. Shuffling irritably over to the trick dispatcher's table, he stared down at the sheet.

"Aw, hell! Do it as you like."

IT WAS like stringing beads to slip the rotary into the opposing streams of traffic, fitting her into the eastbound flow and protecting her against the counter current.

Here in the warm room, with his long fingers on the quick pulse of the east end, Eddie could feel the tension grow out there on the winding ribbon of steel under the storm blanket.

The rotary came up out of the yard and paused beside the station to get orders from the telegraph office below. She looked dogged and sullen, with the blunt nose of her hood showing its teeth in a nine-

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foot cutting wheel, the big Mallet locomotive behind, and a coach and caboose trailing out into a diminishing tail. She pushed ruthlessly into the storm, tossing plumes of snow which the wheel picked up from the light drifts across the rails.

No. 37 had the derailed gon back on the iron and was ready to move again. Eddie gave her time on 18 to get to Milan. The sounder lapsed into silence. The 4-spot, the Limited, clanged in from the west. They would have taken her off and diverted all connecting traffic to the Big Six if old Salt and Molasses hadn't made a dicker for the Prairie Central.

There was a brisk bustle of changing crews and engines. Passengers flitted across the wind-swept platform. Then she rolled on, the line of dim lights fading into a curtain of whirling snow, and vague faces showing from the blurred Pullman windows.

Hi Wheeler reported from Hugo that the wye there was drifted so he couldn't turn his engine.

"What I mean, Eddie," he said through the lightning slinger, "is that there's a drift as high as the stack, and that wye iron ain't heavy at all. Should I go for to ramming around with this old Mallet, the track's likely to come apart."

Eddie told the trainman that he'd order the rotary to plow it out for him. Later, Bruce, in the Smoky Hill, snapped his call and reported that conductor Blake with the blade plow couldn't make it any farther.

"Tell him to get in the clear there and wait," Eddie ordered.

The Special was keeping close to her schedule. The storm on the east end hadn't yet slowed her much and he'd kept her clear of traffic. The Smoky Hill cuts would be the tight place to get her through.

Mr. Donby had arrived at the wreck. He was pestering Walker and the west-end dispatcher with a ceaseless stream of queries and orders.

The storm kept moving in. The operator at Cutter broke in on Eddie to report that No. 18 was stuck in a drift two miles east of his station. The brakeman had walked back to town to pass the word. He said that a ridge angling off from the right-of-way had caught the shifting wind just right to funnel the snow into a deep ridge across the main line.

Every second the snow was piling in on the stalled trainload of holiday passengers, increasing its stubborn grip. You had to move fast to extricate her before she was hopelessly buried, blocking the line. The brakeman said the track up to the rear end of the train was comparatively clear for the moment.

EDDIE tapped out Hugo's call and asked, "Is Hi Wheeler there in the office?"

"And how!" the brass pounder droned. "He's all wound up about a blonde named Sally."

"Tell him to bust down to Cutter with his engine. Eighteen is stuck in the snow a mile east of the station. He's got to pull her out. Tell him to move fast. Here's his order."

Eddie got Cutter and Milan and sent it in a quick patter of Morse. Then Walker looked up from his sounder that had been babbling Mr. Donby's worst fears, and called to the boomer:

"The super wants to know shouldn't we have waited and let the rotary dig 18 out? He says the helper engine will likely get stuck in there too, and that would sure tie things up."

"Tell him," Eddie answered, "that it's a fresh drift and that 18's hind end isn't in it, but the whole train will be covered if we leave her there long. The rotary wouldn't do her any good from this end." He took another quick glance at the sheet. "And tell him we'd better hold the rotary at Virgil till the Special gets close up to her."

Walker sent and listened and shook his head. "He says, 'Hell no!' The rotary's plowing out the west end ahead of the Special and he wants her turned around at Virgil and sent right back on the run."

"OK," said Eddie, "if he says so."

Walker looked at him dubiously. "That won't be so good."

Then the storm played another trick. The wye at Hugo and the long passing track were under the windy side of the graded main line, and snow had drifted high over them both.

The rotary, on orders, paused here and cleared the tracks and then pushed on, leaving howls of grief. For in plowing out the passing track the rotary had covered up No. 48, a mixed freight waiting on the team track to follow the 4-spot out.

"Mister," the brass pounder at Hugo lamented, "48 is sure covered. She'll have to be dug out or else left there in refrigeration till springtime."

Eddie sent. "We'll dig her out."

He found that section crews were on tap at Cutter, Milan, and Quincy, awaiting call. He instructed them to be ready with their tools.

Hugo reported the 4-spot by. Cutter said something seemed to be moving out there in the snow to the east, and then said it was Hi Wheeler's Mallet dragging No. 18 into town by the tail, with possibly help from the passenger train's own engine.

Hi snaked her into a siding and reported through the local operator: "We blamed near blew the stock off this old Mallet, but we brung her in. Now what do I do? Wait for 33 and help her in from here?"

Eddie told him at length.

"Eighteen will wait there and follow the rotary and the 4-spot out. You follow 18 to Quincy and pick up the section crew there. Then return to Hugo, picking up the section gangs at Milan and Cutter. The rotary covered 48 at Hugo and the gandy dancers will have to dig her out. I'll fix you up with running orders."

A wail of indignation came from Hi through the brass pounder. "He says, how come you're making a messenger boy out of him and his Mallet? Is it so that you can hold him here and take Sally to the dance tonight?"

"Tell him," Eddie said glibly, "that he asked for work when he came here," and sent the order.

TRAFFIC was bunching up ahead of the Special. There'd be too many trains around Smoky Hill by the time it arrived there. And you couldn't estimate with much certainty what time any of them would make.

Eddie let Second 19 out of Latimer. Mr. Donby was still bearing down on Walker and the cranky night chief was getting his back up.

Night had come. Two operators signed off and went home. The west-end dispatcher sat and sweated. Walker talked with the yard office. The procession of trains moved east out of Cutter. You could feel the sharp edge of the cold moving in across the countryside.

Clark reported the special by. Behind him, Norman OS'd the 5-spot twenty minutes late.

Quincy reported the rotary, the 4-spot and 18 by, and Hi's light engine in and turned and headed back with the section crew. Eddie followed him through Milan and Cutter to Hugo. He sent the blade plow down to Quincy. He'd bring him back through the cuts to clear them just ahead of the Special.

Hi reported from Hugo: "You got anything more you want a boy on a fast horse to do? I just unbent them section crews from around the boilerhead and put 'em to work minin' out 48. This night is gettin' mighty cold."

Eddie Sand checked the sheet as his mind dug into new developments. Those Smoky Hill cuts would be pretty well filled again by the time he'd get the blade up through them to meet the Special. He hadn't much confidence in Conductor Blake in charge of the plow. Hi Wheeler was the man to handle a tough job.

So he sent: "Tell Hi to turn around and return to Quincy and report to me the minute he hits the telegraph office."

The brass pounder came back with a fair imitation of Hi's laments.

"Wheeler wants to know what the hell for?" he rattled. "He says the way things are going, he'll miss out helping 33 in, and it looks to him like just plain sharp-shootin' on your

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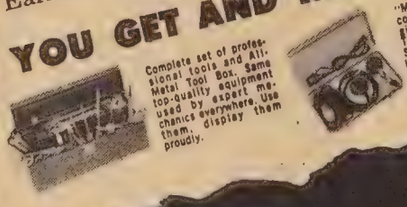

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part. Seems like he has a date with a blonde."

"Tell him," Eddie sent back, "that if he doesn't come home by the time I'm off duty I'll take good care of Sally."

"That's what he's afraid of," the operator snapped. "He says he'd just as soon have a big gray timber wolf protecting his interests."

THE ROTARY was hurrying back through the cuts to answer Mr. Donby's call to the west end. First 19 followed her closely and they both slowed up through Quincy in good time. Thirty-three came down the cuts next but she was a long while reaching Bruce, where the skipper dropped a "butterfly" to report the snow piling up again. Might be worse between Bruce and Quincy. It was going to be tight getting that Special through.

Hi made it to Quincy for First 19 and promptly queried Eddie: "Do I turn the Mallet and tie onto 33 when she shows here?"

"You get in the clear as you are," Eddie instructed, "and don't move till I tell you."

Time lagged then while they waited for No. 33 to fight her way through the cuts. The hands of the big clock slid slowly in their inevitable arc. It was one of those times when a dispatcher sits helpless and sweats over the train sheet, seeking a hole he might have overlooked.

The boomer leaned back and let his mind drift. It did no good to get overstrained when Mr. Nickerson was out on the line.

Fact is, Salt and Molasses didn't like to see a guy flustered. Just figure them close and safe. The old man knew operations from all the angles. He knew what was sound.

Superintendent Donby had Walker on the wire again and it sounded from his tone as if he were really coming untied.

"The super wants to know why you didn't hold 33 at Bruce instead of sending him on through the cuts ahead of the Special," the night chief bawled as he held his hand at rest on the key.

"Yeah," said Eddie, "I guess he does."

"I gotta tell him something," Walker shouted. "What'll it be?"

"Ask him is it better to stick 33 in there or the Special?"

Walker grunted and worked his key.

Eddie waited as long as he dared and then put out an order at Virgil holding the Special till the line cleared up ahead of her.

Perry Walker turned slightly pale as he listened to that order.

"It's getting tighter every minute," he complained. "Wait till Donby hears about this one!"

THE NIGHT CHIEF'S own cranky disposition wasn't improving. You could feel him wind up tight with each tick of the clock as they waited for 33 to show. The clock kept walking away with the minutes while the hotshot remained in the white hell between Bruce and Quincy fighting the heavy drifts.

Virgil reported the Special in and standing by. Mr. Nickerson would certainly dig into the delay if he were interested in the Prairie Central. There'd be chills and fever on the Oberlin Division caused by this check in his schedule.

Eddie could hear a half-dozen operator at the wreck trying to impart Mr. Donby's shredded feelings to Walker.

"He wants to know," Walker snarled, "why you didn't send the Special on down to Bruce while you waited for 33 to show up at Quincy."

Eddie said patiently that he'd send the Special any place Donby told him to. "But," he added, "we'd likely stick Mr. Nickerson in the cuts if we sent him in there now, which wouldn't be good at all." He grinned at the night chief's sad expression. "The hotshot will get something through, if it's only a brakeman. Bill Spunk is the skipper and he usually knows the score."

The west-end dispatcher brooded over his sheet. A big hook had cleared away the wreckage, and the gandy dancers were working at top speed in the blinding snow to lay new tracks in the gap torn out of the main line. They were nearly set to begin operations again.

"Donby's taking a light engine and coming in," Walker said wryly. "Everything happens to us."

The rotary clanged in under the sheds from the east. A flickering blue flare of arc lights danced on the grinning teeth of the cutting wheel. The west-end dispatcher looked at Walker while the skipper of the rotary was asking for orders from the ticket office below.

The night chief turned on Eddie. "Look," he pleaded, "you've made all the guesses so far tonight, so suppose you keep on. Do you want to turn the rotary back and dig out 33 and clear the cuts for the Special, or just let her ramble on down the west end as Donby says to do? Donby is out of reach now, so we can use our own ideas. He'll be sore whatever we do."

Eddie's eyes slid back to the clock. A picture of what was happening in the wind-whipped snow of Smoky Hill flitted through his mind.

"Better send the rotary on west," he said. "I'll make Donby happier."

"Okay," Walker grumbled, "but you can't make him happy that easy."

THE ROTARY snarled back at the storm as it headed west. Meanwhile, in the dispatcher's office, the sounder went to sleep in the resonator, and the wind whooped under the eaves.

Virgil's operator wasn't saying anything about the Special he had tied up there. Eddie wondered what Mr. Nickerson was doing at that bleak little station. He was probably congratulating himself that he hadn't taken over the PC.

The night chief looked up grimly as his sounder chattered. "Donby's stopped his light engine at Charles," he called as he listened, "and now he's raving because we didn't send the rotary back from here."

"Yes," said Eddie. "I expected it."

"You ain't much help with alibis."

Walker worked his key and listened. Then he got up and shuffled across to the dispatcher's table and peered down at the sheet.

"Eddie," he moaned, "that man's going to blast us all to hell the minute he arrives. He's real mad." The night chief screwed up his brow. "And 33 ain't showed at Quincy yet. Looks to me like you ran out of the right guesses about an hour ago."

The wind raised a derisive howl. Hard snow scratched at the windows.

"Bill Spunk'll be showing any time now," the boomer said. "He's one conductor you can rely on."

Walker turned back to his table. The dispatcher's sounder came unlatched and spat at them viciously.

"DS Q 33 CMG." Quincy was reporting the hotshot coming into his yard.

"And," the operator continued, "she's hard to distinguish from the landscape. Looks like a phantom train. Even her bell is choked up."

The boomer flipped the key open and pounced: "Tell Hi Wheeler to couple his engine in behind the blade plow's locomotive. Tell Hi that he is in charge of that train in place of Blake till he's cleared the cuts. Tell Blake that, too. I'm sending the blade to Virgil where he'll turn around and come back ahead of the special. *Nineteen copy three.*"

Eddie snapped the running orders in crisp Morse. The operator shot the repeat and caught Eddie's complete. Then he came back: "Blake says he won't turn his train over to Wheeler."

Eddie sent. "Tell Wheeler to move fast."

"He's movin'," the operator returned.

"Tell Blake he's out of luck," Eddie went on. "He can stay there at your station till his train gets back and then I'll turn it over to him again."

"Blake says you've got no authority to pull him off his train. He might make a scrap of it."

"He should have done his fighting with the drifts," Eddie replied coldly. "Just remind him I've got authority to sign the division superintendent's name to any orders."

BILL SPUNK reported then. He'd had a time with those drifts. It took him forty minutes on a half-mile

THERE'S DOUGH in Spudnuts
--- the glorified DOUGHNUT

Early in 1953 when John C. Hargis suffered a serious knee injury while playing professional basketball, things looked pretty black. "But looking back now," says John today, "This injury, which took me out of professional athletics, just might have been one of the luckiest things that ever happened to me. Because, it was only a few months later that I became interested in Spudnuts, and opened my dealership in San Antonio, Texas."

John C. Hargis

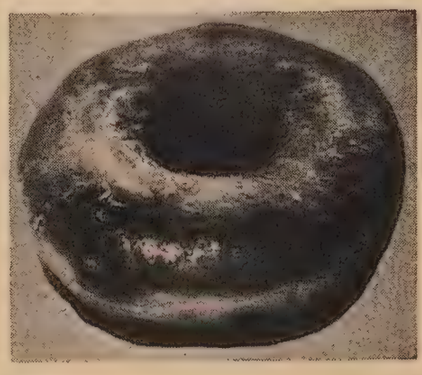
John's new Spudnut Shop was an immediate success. Studying the ideas and methods recommended by the parent Spudnut Company, John went into the Little Businessman's Sales Program; he contacted military installations and schools and regular, daily deliveries were instituted. This intense activity, with the heavy daily sales within the store itself, soon pushed production to an excess of 500 dozen Spudnut products daily.

Recognizing that during the post-war years America has truly become a "nation on wheels", after careful study and consultation with the Company, John decided to open his first Spudnut Drive-In, featuring window service. This new unit, opened in late 1956 was another outstanding success.

Always with a warm spot in his heart for Austin, where he attended Texas University and played basketball, John opened another Drive-In there in February, 1958 — almost a duplicate of his San Antonio store, and its growth pattern is paralleling its predecessor.

Throughout his Spudnut career, John has been assisted by his lovely wife Dorothy; and for the four complete years they have been in business, have been one of the ten Spudnut dealerships in the nation who win the coveted annual "TOPPERS" awards.

"I just can't imagine being in any other business," says John, "It is so easy that anyone can learn the principles quickly; it's interesting, because the Company is always offering something new; and it's profitable — certainly a point of interest to anyone. The Company has been wonderful — has helped me constantly with national advertising, a cooperative advertising program, and regular calls by my District Manager. Spudnuts are the best!"



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of upgrade. Now, what about his helper engine?

"He'll have to do what he can without her," Eddie told him, "till I can get Wheeler back from clearing the cuts. Tell Spunk to go as far as his engine will take him, then clear and wait for the helper."

"He says okay," Virgil rattled.

Walker strode to the end of the dusky room and back. "You can't take a skippers' train away from him out on the line without a damned good reason," he blew off. "Seems to me you're just looking around to see how much grief you can have on hand when Donby gets in."

Quincy came back to report the blade plow out with two engines.

"That boy Wheeler," the brass-pounder added a footnote, "moves like he's in a hurry. He said he'd put cyanide in your coffee at the first chance. That had something to do with a blonde."

Eddie grinned and crossed to the telephone. He called a number and talked amiably. He was still smiling when he sat back in the old swivel chair.

Walker came with another worry. "It's a wonder we ain't heard any complaints from Mr. Nickerson. Think we'd better call Virgil and see what's happening?"

"I don't think so," Eddie decided. "Better not stir up any more trouble than we've got."

"Mister," said the night chief, "we sure gave Nickerson enough to remember us by on this lovely evening. Between everything, the Prairie Central ain't likely to spend a very happy Christmas."

The dispatcher's office quieted, but the wind moaned disconsolately and cold tightened its grip on the white world.

Eddie went back to maneuvering traffic. Mr. Donby stopped his light engine at each telegraph station to plague Walker with queries and unusable advice.

"Hi Wheeler's considerably overdue at Virgil," Walker said.

"The cuts at the upper end were filled again," Eddie reasoned. "It'll take time to swab 'em out."

From his swivel chair he visioned the bob-tailed train, two engines and a caboose, heading into the drifts, throwing snow from the blade high over the stack. He could feel the shock and shudder as the snow checked and halted them, smothered the power of the huge engines in a feathery mass. They'd pull out and back up and then take a header, the engines blasting, putting all their weight into the battering ram.

THE BOOMER didn't have to glance at the clock to know the time. When you deal almost exclusively in fleeing minutes you develop a sense that ticks off the seconds somewhere inside you. He felt them sliding away while the Special stood at Virgil, hung up there with the man who could decide the fate of the Prairie Central, and while Hi Wheeler was making a desperate drive with the blade plow to clear the way for him.

Walker stared morosely at the sounder. The brass tongue began to chatter. Virgil was on the wire. The blade plow was in and heading through the wye. Hi had dropped off at the station and he reported that the wind was down and it would be easier going back. He'd be turned in five minutes and ready to go down ahead of the Special.

"Good work!" Eddie flashed.

Virgil reported him headed west at once. Ten minutes later the Special followed him.

The brass-pounder added: "A little old thin man with big glasses come into the office of that Special. Seemed like a very nice gent. Gave me a cigar. Then he sat down at the table beside me and talked about the PC and the way traffic was rollin'. I guess I told him everything you and me both know."

"That man," said Eddie, "is Mr. Nickerson."

"Nickerson?" echoed Walker.

They heard the funereal clanging of Superintendent Donby's light engine coming down the siding behind the station at the same time the Special hooted from the lower end of Oberlin Yard.

Walker sat down at his table and snatched a file of correspondence and pretended to study it. Eddie turned to the window. The wind had laid and it was no longer snowing. The Special rolled down the main line under an easy throttle.

Mr. Donby's impatient feet pattered on the stairs and he erupted into the room.

"What about Mr. Nickerson?" he asked. "Did he have any complaints because you delayed him so long at Virgil?"

"No, sir," said Walker. "Not a word."

"He's bound to kick," the super fretted. "You'll remember I told Carter he oughtn't to leave Mr. Sand on second trick with things popping the way they were, but Carter put him on anyhow."

Eddie said from the window: "It won't be necessary to remember anything except that I was on the sheet in my regular turn and I did all the maneuvering. You can generally get out of a jam by naming a goat and firing him. It's sound practice."

OUTSIDE, a man dropped off the observation platform of the private car and crossed the platform.

"It may be necessary to fire more than one man in this case," Mr. Donby hinted and glanced at Walker. "If Mr. Nickerson hasn't taken over the PC, the Big Six will and that means a housecleaning either way."

"As for Mr. Nickerson," Eddie drawled, "I'd say he's coming to call on us right now."

"You mean," Mr. Donby gasped, "at this time of night?"

The door opened gently. A thin, little, old man in derby hat and big spectacles slipped into the room and closed the door behind him.

"Good evening, gentlemen," he said. "My name is Nickerson." His round glasses searched the room owlishly. "I was looking for a telegraph operator, one of your dispatchers, by the name of—ah!" He saw Eddie and nodded. "It is a real pleasure to see you here, Eddie Sand. The night operator at Virgil said you were on this trick tonight, so I came

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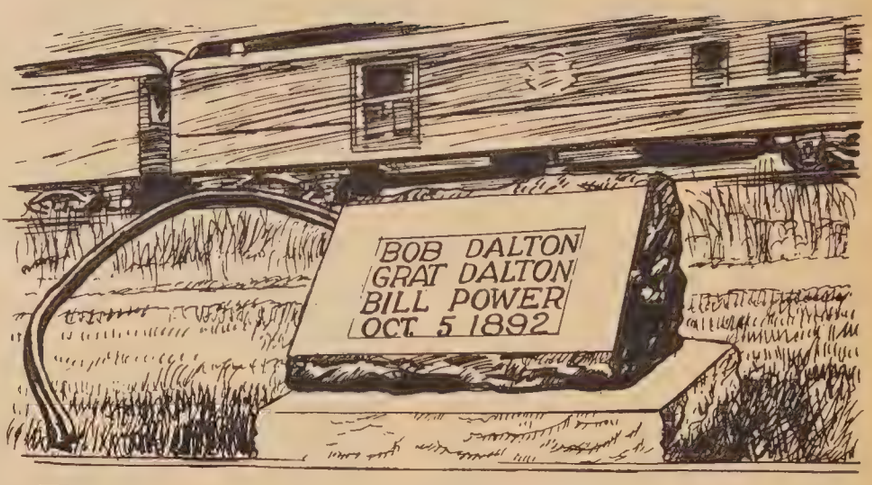
DOUBLE MONEY BACK GUARANTEE

Along the Iron Pike

by Joe Easley

ON THE BEEBE-CLEGG PRIVATE PULLMAN, VIRGINIA CITY, ALL INSIDE DOORS SWING ON DOUBLE HINGES TO PERMIT NIGHTLY INSPECTION BY PEDIGREED MASCOT, MR. T-BONE TOWSER.



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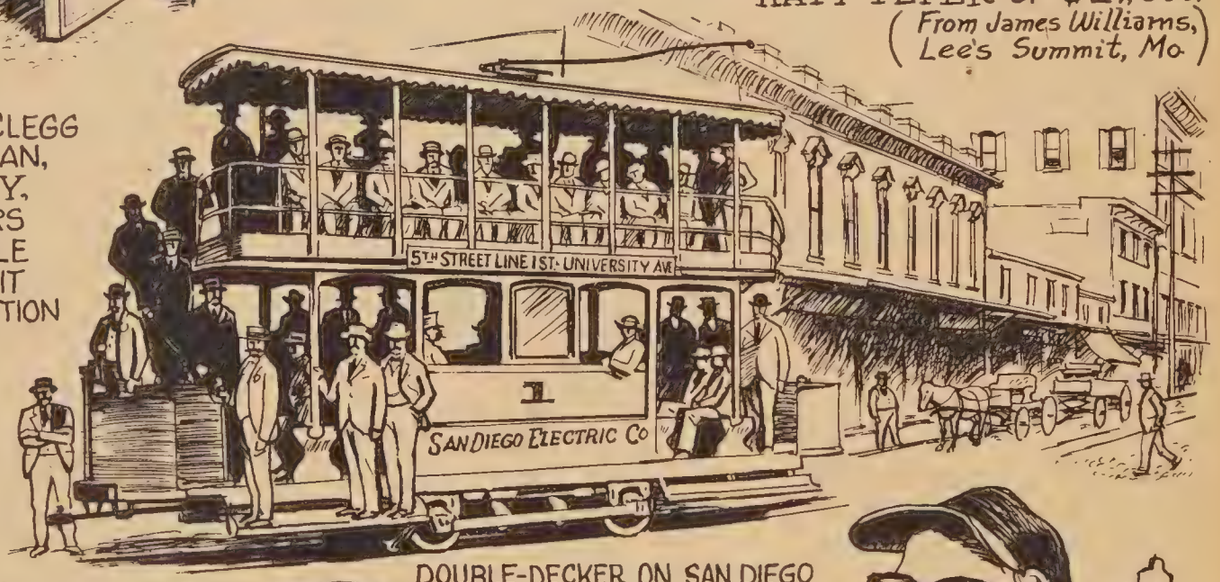
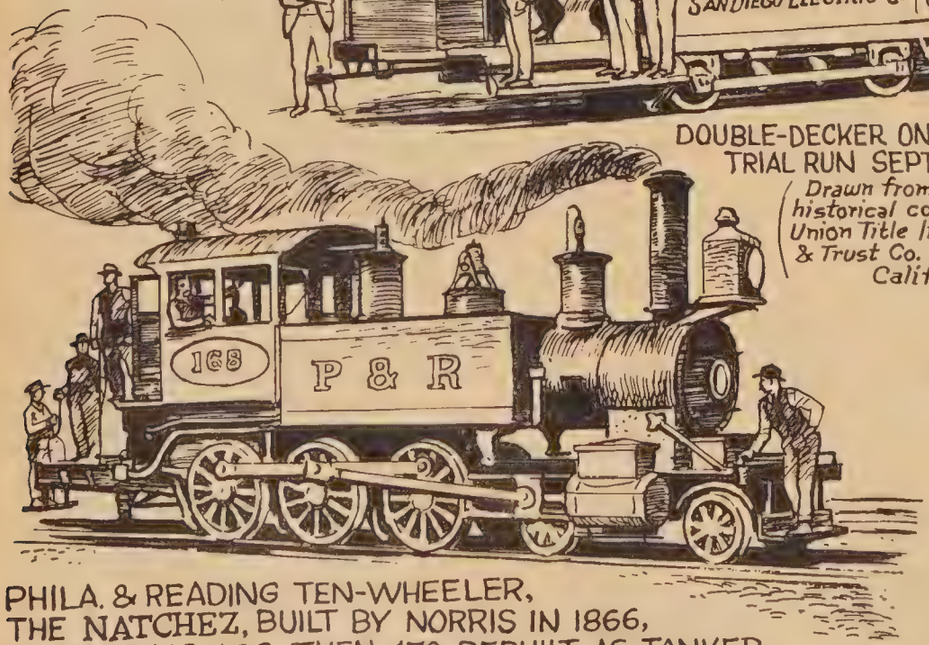
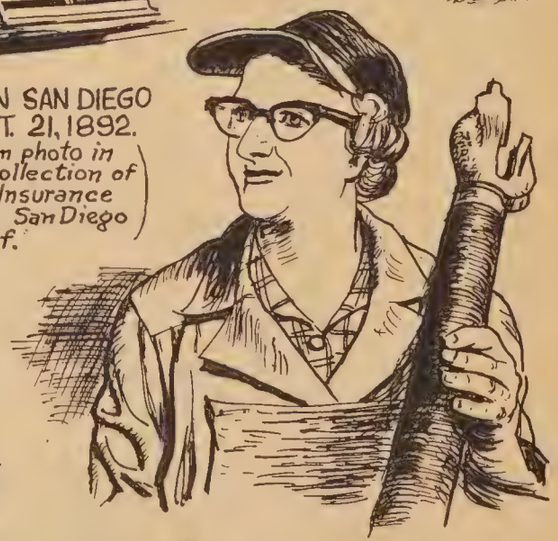
(From James Williams, Lee's Summit, Mo.)



DOUBLE-DECKER ON SAN DIEGO TRIAL RUN SEPT. 21, 1892.
(Drawn from photo in historical collection of Union Title Insurance & Trust Co. San Diego Calif.)



PHILA. & READING TEN-WHEELER, THE NATCHEZ, BUILT BY NORRIS IN 1866, BECAME NO. 168, THEN 470. REBUILT AS TANKER, THEN CAMELBACK. SOLD IN 1918 TO QUAKERTOWN & BETHLEHEM RR. DESTROYED BY FIRE IN 1922.
(from Warren Stowman, 2011 W. Godfrey Ave., Philadelphia, Pa.)



MISS ADA PARKS, MEMBER OF BROTHERHOOD OF RAILWAY CARMEN OF AMERICA IS AIR-HOSE SPECIALIST IN CHESAPEAKE & OHIO SHOPS, GRAND RAPIDS, MICH.

in to wish you a merry Christmas."

While they were shaking hands, Walker came to his feet like a released spring. Mr. Donby stood on a bias and stared.

"That's mighty kind of you," said Eddie," and the same to you."

The men of the Prairie Central would have given a lot to know that night who had won the fight for control of their railroad. The newspapers hadn't been able to get any information at all on the Chicago session. Perhaps Mr. Nickerson hadn't yet reached a decision. Eddie studied him sharply.

"All of us on the Prairie Central have been highly gratified that you're interested in this road," he said. "We extend you full co-operation and wish you the best of luck."

Mr. Nickerson gave him a quick, shrewd glint. Salt and Molasses knew he was being reconnoitered. Then he glanced at the dark window. His eyes seemed to be searching all the miles of winding steel.

"Interested in the Prairie Central?" he inquired softly. "*Involved* is the word. I think we can make a railroad out of this property. Is that what you wanted to know?"

Chief Walker let go a long, whistling sigh. Superintendent Donby rocked on his feet.

"Yes," said Eddie, "it is what we all had been wanting to hear." And in that case," he suggested, "you had better meet these two gentlemen."

After the introductions S.A.M. shook hands with Eddie again and turned toward the door.

"I hope you find it convenient to remain with the Prairie Central, Mr. Sand," he said. "I fancy we could use your talents to good advantage—in the higher places." He opened the door. "A merry Christmas to you all," and the new president closed the door behind him.

Thirty-three, with Hi's helper engine tied on as pusher, stamped into the yard, the bellow of the two locomotives booming under the station eaves in solmen rhythm. From far out on the plains to the east the whistle of the 5-spot screamed a challenge to the cold wintry night.

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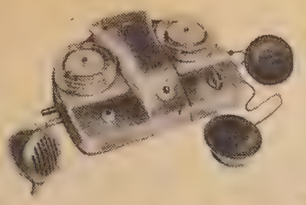

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☐ Send C. O. D. Enclosed is $3.00 deposit. I will pay postman $ plus all C. O. D. and shipping charges for the items ordered.

Church bells clamored suddenly, their clear tones ringing out merrily in the crisp air. It was midnight.

Hi Wheeler was trudging up through the yard under the flicker of the arcs. Long and limber and swivel-jointed, his old fur cap canted at a rakish angle, his feet lifting clean and quick. Eddie met him.

"Holidays are hell on railroaders," he grumbled as they moved across the platform.

They turned up a dim street, the snow squealing under their feet. A large, old-fashioned house glowing with light from top to bottom came out of the thin darkness. Eddie turned in at the gate.

"Hey!" said Hi. "Where'd you think you're goin' this time of night."

"To make a Christmas call."

"Look," Hi pleaded, "I ain't dressed for visitin'. It's like you said this afternoon, railroaders don't celebrate Christmas."

Eddie Sand chuckled. "This time they sure will. Oh, come on!"

Before Hi could back away, his pal banged on a huge knocker. The door swung wide. A shaft of light spread out over the snow as the wife of Conductor Cadagan greeted them effusively.

In the big room beyond, they saw an evergreen tree hung with tinsel and glittering balls, gay strings of popcorn, candy canes, and gingerbread animals. They heard a fiddle scraping the *Missouri Waltz* and feet dancing to the plaintive tune. Then Hi became conscious of a dimpled blonde head peering over Mrs. Cadagan's shoulders, and a luscious shape, with arms outstretched, stepped into full view.

"Why, Sally—"

For an instant Hi Wheeler choked up. Then he tossed his cap to the ceiling and shrugged out of his sheepskin coat. He yipped once and seized the girl and they whirled away to join the other couples in the living room. Christmas had come to the Prairie Central. ●

BOOKS of the RAILS

BY P. C. GRAVES

NARROW GAUGE IN THE ROCKIES, by Lucius Beebe and Charles Clegg, Howell-North, 1050 Parker St., Berkeley, Calif., 224 pages, $8.50.

This elegant presentation of slimline railroading embraces a gorgeous era in the history of Colorado, when an entire generation rode the narrow gauges to golden destinies of riches and romance. Here in diminutive scale were all the luxuries of overland travel—exquisitely appointed private cars and breakfast menus that boasted hock and champagne. These were the trains of the powerful Denver & Rio Grande, the unforgettable South Park, and the incredible Mears carriers that penetrated the mountain fastness to get to remote diggings impervious to standard operations.

Richard H. Kindig, 3831 Perry St., Denver, Colo.

Dwarfed by the mighty ramparts, Rio Grande Southern narrow-gauge trains seemed even smaller than they were. Here a Rocky Mountain Railroad Club excursion nears Telluride, Colorado.

"Narrow Gauge in the Rockies" has captured the glamor and ruggedness of a dramatic period of Western growth. It is a tale of swaggering millionaires who lived in the fabulous hotels of Central City, Silverton and Gunnison; of lusty miners in the raw new towns and remote bonanzas.

The frontier camera is represented in a matchless album of photographs, and such contemporary experts as Richard Kindig and Gerald Best have contributed greatly to the pictorial interest of this magnificent publication.

We gave our readers an advance sampling in the June and August (1958) issues, in chapters on The Mears Short Lines and the Florence & Cripple Creek because we felt they would want to know about this newest and most exciting Beebe and Clegg offering. "Narrow Gauge in the Rockies" is recommended as a handsome addition to any railroad library, and is well worth the price.

BULLETIN NO. 98, Railway & Locomotive Society, Baker Library, Harvard Business School, Boston, Mass., 100 pages. Members $2., non-members, $3.

The lead article, *The Lake Superior & Ishpeming Railway* is an account of one of the most fascinating lines in the country. Known as the "Little Sally & Imogene," the "Lazy, Slow & Independent," its economic importance to Michigan's Upper Penisula is unquestioned because of its vital service in transporting iron ore from the Marquette Range for shipment to industrial areas of the Great Lakes Region. Its motive power always has had a special interest to railfans since it is an odd mixture from various railroads, fixed up to a sort of "family resemblance."

The story, from its beginning in 1857 to the present time, is recorded by Aurele A. Durocher, with photos of rolling stock, and several maps.

The Strange Case of Robert Schuyler, by Sidney Withington, is a profile of the first president of the New York & New Haven. Harvard graduate (class of 1817) and nephew of Alexander Hamilton, Robert Schuyler represented the last word in respectability and financial responsibility. He was appointed president in 1846 and resigned in 1854 under circumstances that made headlines all over the nation.

Some Early Locomotive Patents, by Paul T. Warner (which supplements one he wrote in Bulletin No. 87), lists Forneys, Fairlie-types and other engines built in the United States, England and France.

Also included in this issue are brief histories of the following railroads: The Emmitsburg and the Monocacy Valley of Western Maryland, the Whitneyville & Machiasport of Maine, and the Hocking Valley of Ohio.

THE LITTLE TRAIN, by Graham Greene, 36 pages, Lothrop Lee & Shepard, Inc., New York City.

A leading English novelist has written this story with a charm and delicacy that will capture the hearts of all young children. Illustrations by Dorothy Craigie are delightfully composed to match the mood of the book.

THE FREIGHT YARD, by Dorothy Voorhies Stever, 31 pages, Melmont Publishers, Inc., Los Angeles, Calif.

Putting a freight train together seems like an easy job as described in this primer on railroading, and Robert Bartram's illustrations add to the fascination of the operation.

T-O-O-O-O-O-T! by Betty Lou LaWell, 23 pages, Melmont Publishers, Inc., Los Angeles, Calif.

A train-whistle and counting book written in verse and illustrated by Paul Julian.

* * *

The last three books are on sale in book stores all over the country, and are included in our list as Christmas-gift suggestions for the young railfan set. ●

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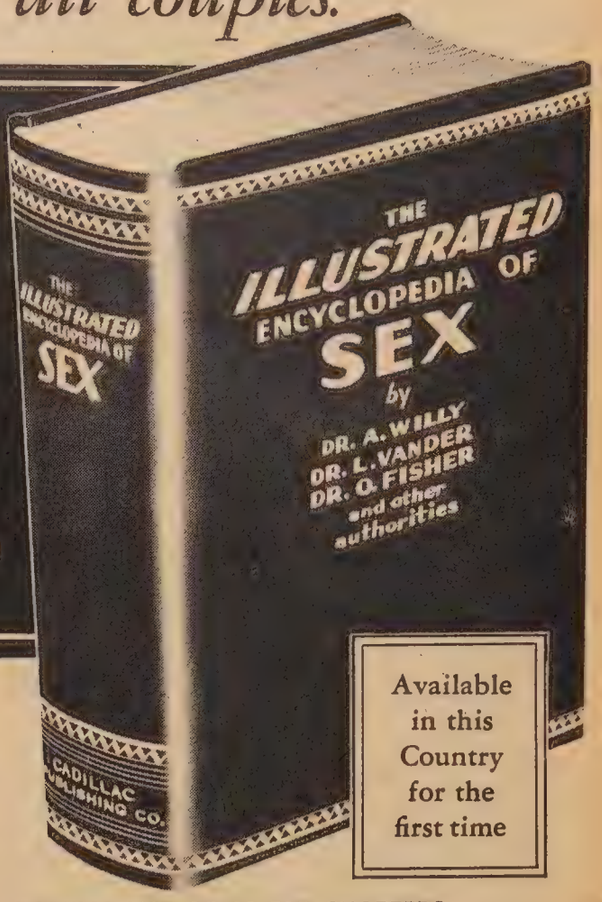

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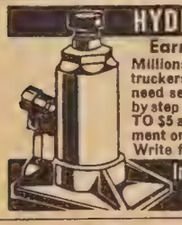

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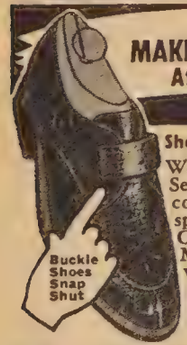

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MAIL CAR

(Continued from page 10)

nardino passenger locals until 1947," he writes, "she was downgraded to stationary boiler work in the L. A. coach yards. Then in about September '48 she went to San Bernardino for scrapping and they cut her up two months later. But at the time the Santa Fe still had two 4-4-2's hauling local freight between Riverbank and Calwa, Calif., on the Valley Division, Nos. 1458 and 1462, both working six days a week. Both were taken out of service in the spring of '49 and November saw them scrapped at San Bernardino. Does any reader know if other roads used Atlantic types regularly in freight service?"

And this comment comes from John Gascoyne, 4520 Adrian St., Rockville, Md.: "H. L. Kelso may be interested to learn that Interstate RR. engine No. 9 was not the only 4-4-2 built in America in 1916. The Chesapeake & Ohio's official blueprint motive-power book lists No. 278 (originally 80), a 4-4-2 (Class A-16-S) as having been built by 'Pittsburg' in 1916. I believe the collection of August A. Thieme, Jr., includes a photo of C&O No. 296, an Atlantic type built by Alco in 1907, same class, same specifications as the subsequent No. 276." ●

THE ONLY woman we know of whose *mother* was a gandy dancer and whose father was a locomotive builder is Miss Selma J. E. Prescher, former Southern Pacific brass pounder known as "Espe," 10665 Pearmain St., Stonehurst, Oakland, Calif.

"My mother's name was Hulda Kettner," Espe writes. "Although she was born at Dunkirk, N. Y., her parents were German-born and they went back to the Fatherland, taking Hulda with them. When she became 16, she got a job laying track on the Breslau-Freiburg & Schweinitz Railroad at Kuestrin, Germany. I wrote a true story about her that was published in the October, 1914, issue of *Railroad Magazine,* entitled, 'Mother Worked for 47 Cents a Day.' Her father was a track watchman on that same road. Later, Hulda returned to America and married the man who became my father. He was employed by the Brooks Locomotive Works at Dunkirk."

Miss Prescher is an authority on railroad operation, especially telegraph service, and can answer technical questions about her hobby without batting an eyelash. Barbara Kreimer admits she like to have her assistance in digging up answers for the *Information Booth.* ●

CHRISTMAS CARDS in color are being issued again this year by Elizabeth Tone. Three of them show steam locomotives: D&RG 8-wheeler *Montezuma* in the Royal Gorge; Monson No. 4, an 0-4-4-T built by Vulcan in 1918, now running on Edaville RR. in Massachusetts, and Maine Central 376. The first two are narrow gage. A fourth card shows an interurban, Lehigh Valley Transit 812.

Elizabeth is a professional artist. Among other things, she painted our Aug. '58 cover *Sunset Limited* and the picture of an engine with a billowing smoke plume that adorns the Cabot hi-fi LP album, *Songs of the Railroad.* She'll send a sample card and price information to anyone who writes to her at 55 Vandam St., New York City, if he encloses a 4c stamp. ●

A BIOGRAPHY of *Harry Bedwell, Raconteur,* by Frank P. Donovan, Jr., with four pages of illustrations plus the front cover, fills 35 pages in the May '58 issue of *The Palimpsest,* a scholarly journal issued monthly by The State Historical Society of Iowa in Iowa City at 25 cents a copy. The Society sponsored this brochure because Harry Bedwell was born in Iowa. Donovan tells of his early life on a farm, his railroading, his literary career, and his personal side, including his fondness for animals.

Harry began writing fiction for *Railroad Magazine* in 1909, when he was 21 years old and the magazine itself was only three. His last *Railroad* contribution, "The Superintendent's Story," was published in Dec. '55, just after his death, and since then we have reprinted much of his work.

In all, he wrote 35 stories for *Railroad Magazine,* nine for *The Saturday Evening Post,* two for *Argosy,* and many others. Shortly before he died he had plans for doing a second novel. His first and only book was *The Boomer,* built around his popular character Eddie Sand and dedicated to Freeman Hubbard, editor of *Railroad Magazine,* whom he termed "Eddie Sand's best friend."

Harry's own experiences as a roving operator and dispatcher supplied his best story material. As to whether or

not Eddie Sand was a real person, Donovan says the carrot-topped boomer "is a composite picture of many peripatetic railroad men—and especially Charley Duffey from Sullivan, Indiana. Those who knew Bedwell insist, nevertheless, that there is much of Harry Bedwell in Mr. Sand."

The biography is warm and friendly, accurate and informative. Frank Donovan has done a good job. The photographs show Harry himself; his two wives, Ellen and Lorraine; his birthplace, and other scenes and personalities in his colorful 67 years. ●

DARLA is a railfan. She rides engine cabs, likes to sing railroad ditties, and tells us, "If I were a boy I'd be a steam locomotive engineer." Her father, Monte F. Daret, is a helper conductor on *El Capitan* and one of her grandfathers was a Union Pacific section man.

Darla Daret

Darla hails from 5609 Baltimore St., Los Angeles. A professional vocalist and songwriter, she has recorded several of her own songs. In 1941, when she was two years old, her father hired out to the UP. It took him 30 student trips to qualify as a brakeman. Four months later he was laid off but went over to the Sante Fe and is still there.

Commenting on George Milburn's article, "Dollar a Division" (Oct. issue), Mr. Daret says he once saw U.S. immigration agents at Oceanside, Calif., take 63 Mexican "wetbacks" from a single freight train on which they had been bumming rides after crossing the border illegally.

"One night," he tells us, "an automobile stalled on the track when I was riding the head end of a freight. A policeman waved his flashlight up and down, signaling us to come on. We nearly hit the stalled car. Afterward he admitted, 'I thought I was giving you the stop signal.' We laughed out loud."

If you live in or near L.A. you can hear Darla on the radio (KXLA) at 11:30 any morning or see her on television (channel 5) any Saturday at 7 p.m. ●

IT MAY SHOCK some readers to learn from Lester Harlow, 5901 Paul St., Alexandria, Va., that no steam-

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Mrs. McGinn, one of my students in Illinois, operates a gift shop and sells Arabian perfume by mail order. F. Basler, N. J., sells Aztec bird feather pictures from Mexico to stores and by mail order.

You might ask, "Why do you let others in on your plan? Why don't you keep it all for yourself?" The answer is that items for import are countless. No one person could possibly handle even a small proportion of them. There's plenty of business in import-export for you and me and many others.

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The last regularly scheduled steam passenger train on any Class 1 road in U.S., pulled by Norfolk & Western 608, made its final run July 16, Roanoke to Norfolk.
Norfolk & Western Railway

powered passenger train can be found in regular service today on any Class 1 road in America. Norfolk & Western operated the last of them until July 16th with Class J (400 series) engines between Norfolk and Cincinnati. These runs are now handled by diesels borrowed from the Richmond, Fredericksburg & Potomac and the Atlantic Coast Line. Three Class J's are now hauling freight.

"The Rio Grande carries passengers on their narrow-gage Silverton line in Colorado," he says, "but this run is listed as 'mixed' and is not shown as passenger service in the *Official Guide*.

"On a recent visit to the Clinchfield Railroad in Tennessee, I was impressed by the cleanliness and orderliness of its shops and yards and the enthusiasm of its employes. I watched the dispatcher sit at the CTC panel, 17½ feet long, and control all operations of a 270-mile main line plus a branch. The Clinchfield has three 4-6-6-4's out in the weeds awaiting a better scrap market. The only steam officially on its roster is a 4-6-0, now known as Clinchfield No. 1. She was built in 1882 as OR&C No. 5, later was sold to Black Mt. Railroad as its No. 1, and has been restored by the Clinchfield for donation to the city of Erwin, Tenn., for permanent display.

"Last summer witnessed a lot of changes in passenger schedules, some trains being consolidated, others dropped, with the result that most all Class 1 roads are now in good shape as far as passenger diesel engines are concerned. I remember times when I paid extra fare to ride the New York Central's *Advance 20th Century Limited* and also the *Advance Commodore Vanderbilt*. Now I find that not only have both 'Advances' been dropped but the two trains themselves have been consolidated, and on top of that the once-proud *Century* even has coaches in its consist."

Now listen to J. L. Watson, 1233 S. Hoover St., Los Angeles, Calif.: "The *Sunset Limited* is no longer the fine train it used to be, because it now carries so many head-end cars, and has to do all the local work east of El Paso, as it's the only train now serving that region. What a beating this magnificent train is taking!" ●

WHISTLES WEST, "a pageant of Western steam locomotives in sound," is a new hi-fi LP record issued by the Railway & Locomotive Historical Society, Southern California Chapter, 15025 Oxnard St., Van Nuys, Calif. The price, $4.95, includes a booklet by John B. Hungerford describing each of the sequences you hear, illustrated with photos of the 12 engines involved. Proceeds from the sale will be used to maintain the Chapter's six locomotives stored at Los Angeles County Fair Grounds.

Discs such as *Whistles West* bring back golden recollections of the Steam Age. This one in particular has a haunting quality. We are proud to have it in our library, to listen to it alone in quiet moments, and to entertain our friends with it. Edward P. Ripley made the recording. Ed was named for his grand father, a great railroad figure who took the Santa Fe out of bankruptcy in 1895 and served as its president 25 years.

"This recording business has led to many adventures," he says. "For example, on the SP's Modoc line the last last three cab-foreards ever to pull one train were put together for our special benefit. The caboose sequence was taken from the rear platform, with one of those monsters whaling away behind our 96-car train and her long high whistle drifting back over the snow, and the sequence is beautiful. That day the thermometer registered zero. By contrast, when I reached the location of the Santa Fe's only remaining steam locomotives, namely, Belen, N. M., they were running merely as helpers, so the only way I could get that gorgeous whistle was in the presence of diesel power—and with the roundhouse thermometer at 116 degrees!"

Another new, $4,95, hi-fi, LP disc that belongs in every railfan's library is *Memories in Steam*, featuring SP steam-power sounds you will never want to forget. It was issued by Mobile Fidelity (Brad Miller, SP engine-crew dispatcher, and Jim Connella), 915 Hollywood Way, Burbank, Calif. One side records a Pacific, No. 2475, wheeling a Central Coast Railway Club excursion last Dec. 31st. Side 2 gives you a cab ride on No. 4455, the type that used to pull the *Coast* and *San Joaquin Daylight*. You actually hear her crew call signals across the cab as they sped along San Fernando Valley and you hear her steam whistle blasting through a mile-long tunnel. The same side also features a variety of other locomotives. ●

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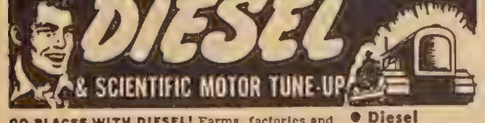

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L&HR No. 93, a Consolidation built by Baldwin in 1925, was scrapped in 1950.
Donald W. Furler

Lehigh & Hudson River

A TRI-STATE ROAD

The importance of the Lehigh & Hudson River Railway lies in its strategic location. Founded March 8, 1860, as the Warwick Valley Railroad and built originally to a length of ten miles, the road is now a tri-state freight-hauler 95 miles long and more than 98 years old. It extends from Easton, Pa., and Phillipsburg, N. J., northeastward to Maybrook, N. Y., where it connects with the New Haven, thus linking the Middle Atlantic States with New England by a direct line.

Each day its rails hum with five eastbound and five westbound freight trains. Two of them go to Andover, N.J., where they connect with the Lackawanna via trackage rights to Port Morris, N. J.

For many prosperous years a well-maintained fleet of coal-burners handled this tonnage. Consolidations did most of the work, augmented by three heavy Mikado types similar to those on the Boston & Maine. Then in 1950 the L&HR bought ten Alco-GE diesel-electric road-switchers and sold all of its tired old steamers for scrap. Next year it acquired three more diesels of the same model. The road's present motive power lacks variety but more than makes up for that with increased efficiency and lower maintenance costs.

All diesel-electrics, numbered 1 through 13, are good standard road-switchers, Model MS-16, built by American Locomotive Co., and General Electric, the first ten in 1950, the others in '51. Their specifications are identical: they have 9x10½-inch cylinders; 1600 horsepower; weight, 239,820 pounds; tractive effort: starting, 59,960 pounds; continuing, 52,500 pounds.

To expedite its handling of through freight, L&HR recently became the first fully radio-equipped road in the Northeast.

STEAM POWER NOTES

All L&HR steam engines were built by Baldwin except 1 through 1st 8, 10 through 1st 15, and 1st 16, 17, 18, 1st 19, 3rd 19, and 1st 24, which locos Cooke turned out.

No. means road number, C. No. means construction number, Cyls. means cylinders, and Dri. means drivers.

First No. 3 had smaller drivers and weighed less than Nos. 2 or 3.

Tractive effort for 43-45 was 67,000 pounds, for 52 was 41,140, for 60 and 63 was 61,140, for 70-73 was 54,070, for 80-83 was 54,600, and for 90-95 was 71,500 pounds.

Boiler pressure for Nos. 52, 60, 63, 70-73, and 80-83 was 200 pounds per square inch; for 90-95 was 220, for Nos. 43-45, was 240.

L&HR never used these engine numbers: 35-42, 74-79, 84-89.

The following were sold second-hand to other railroads: Nos. 1, 2, 1st 3, 2nd 3, 7, 1st 8, 1st 9, 2nd 15, 1st 16, 17, 18, 3rd 19, 2nd 23, 1st 32, 33. So far as we know, all L&HR steam engines have been scrapped.

Joseph Meyers, Jr., Box 267, Oxford, N. J., will answer directly any query regarding disposition dates of L&HR steam engines. For data and photos the author is indebted to Clifton G. Brown, secretary-treasurer, L&HR.

STEAM LOCOMOTIVES

Roster Compiled by Joseph Meyers, Jr.

No.	Name	Type	Built	C. No.	Cyls.	Dri.	Weight
1	Grinnell Burt	4-4-0	1880	1110	18x24	60	64,000
2	Warwick	4-4-0	1880	1111	18x24	60	64,000
1st 3		4-4-0	1881	1164	14x24	(See note)	
2nd 3	(formerly 17)	4-6-0	1892	2089	18x24	56	104,000
1st 4	Belvidere	4-4-0	1882	1355	18x24	60	64,000
2nd 4	(formerly 1st 14)	4-4-0	1892	1971	17½x24	66	100,000
1st 5	Pequest	4-4-0	1882	1356	18x24	60	100,000
2nd 5	(formerly 1st 15)	4-4-0	1892	2232	17½x24	66	100,000
6	Wayayanda	2-6-0	1882	1406	18x24	56	100,000
7		2-6-0	1882	1363	19x24	56	100,000
1st 8		2-6-0	1882	1364	19x24	56	100,000
2nd 8		4-4-0	1906	28423	20x26	68	136,000
1st 9	John Rutherfurd	2-6-0	1886	7979			100,000
2nd 9	(became 1st 25, later No. 55)	2-8-0	1903	23132	22x28	56	180,000
10		2-8-0	1889	1987	20x24	50	124,000
11		2-8-0	1889	1988	20x24	50	124,000
12		2-8-0	1891	2077	20x24	50	124,000
13	(became 1st 24, later 2nd 14)	2-8-0	1891	2078	20x24	50	124,000
1st 14	(became 2nd 4)	4-4-0	1892	1971	17½x24	66	100,000
2nd 14	(formerly 13, then 1st 24)	2-8-0	1891	2078	20x24	50	124,000
1st 15	(became 2nd 5)	4-4-0	1892	2232	17½x24	66	100,000
2nd 15	(formerly 1st 23)	0-6-0	1894	13897	19x24	50	93,000
1st 16		4-6-0	1892	2233	21x26	56	135,000
2nd 16	(became 1st 26, then No. 56)	2-8-0	1904	24128	22x28	56	180,000
17	(became 2nd 3)	4-6-0	1892	2089	18x24	56	104,000
18		4-6-0	1892	2242	21x26	56	135,000
1st 19		4-6-0	1893	2248	21x26	56	135,000
2nd 19	(became 1st 27, later 57)	2-8-0	1904	24129	22x28	56	180,000
3rd 19	(formerly 1st 20)	4-6-0	1893	2249	21x26	56	135,000
1st 20	(became 3rd 19)	4-6-0	1893	2249	21x26	56	135,000
2nd 20		4-6-0	1906	28450	21x26	64	153,450
21		4-6-0	1894	13882	21x26	64	146,516
22		4-6-0	1894	13883	21x26	64	146,516
1st 23	(became 2nd 15)	0-6-0	1894	13897	19x24	50	93,000
2nd 23		4-6-0	1907	30268	21x26	64	153,450
1st 24	(formerly 13, later 2nd 14)	2-8-0	1891	2078	20x24	50	124,000
2nd 24		4-6-0	1907	30269	21x26	64	153,450
1st 25	(formerly 2nd 9)	2-8-0	1903	23132	22x28	56	180,000
2nd 25		4-6-0	1907	30416	21x26	64	153,450
1st 26	(formerly 2nd 16, later No. 56)	2-8-0	1904	24128	22x28	56	180,000
2nd 26		4-6-0	1907	30417	21x26	64	153,450
1st 27	(formerly 2nd 19, later No. 57)	2-8-0	1904	24129	22x28	56	180,000
2nd 27		4-6-0	1907	30418	21x26	64	153,450
1st 28	(became No. 53)	2-8-0	1906	28787	22x28	56	180,000
2nd 28		4-6-0	1907	30424	21x26	64	153,450
1st 29	(became No. 54)	2-8-0	1906	28788	22x28	56	180,000
2nd 29		4-6-0	1907	31502	21x26	64	153,450
1st 30	(became No. 50)	2-8-0	1904	23729	22x28	56	180,000
2nd 30		4-6-0	1907	31503	21x26	64	153,450
1st 31	(became No. 51)	2-8-0	1906	28789	22x28	56	180,000
2nd 31		4-6-0	1907	31504	21x26	64	153,450
1st 32	(became No. 52)	2-8-0	1906	28790	22x28	56	180,000
2nd 32		4-6-0	1907	31522	21x26	64	153,450
33		4-6-0	1907	31550	21x26	64	153,450
34		4-6-0	1907	31551	21x26	64	153,450
50	(formerly 1st 30)	2-8-0	1904	23729	22x28	56	180,000
51	(formerly 1st 31)	2-8-0	1906	28789	22x28	56	180,000
52	(formerly 1st 32)	2-8-0	1906	28790	22x28	56	180,000
53	(formerly 1st 28)	2-8-0	1906	28787	22x28	56	180,000
54	(formerly 1st 29)	2-8-0	1906	28788	22x28	56	180,000
55	(formerly 2nd 9, then 1st 25;	2-8-0	1903	23132	22x28	56	180,000
56	(formerly 2nd 16, then 1st 26)	2-8-0	1904	24128	22x28	56	180,000
57	(formerly 2nd 19, then 1st 27)	2-8-0	1904	24129	22x28	56	180,000
58		2-8-0	1908	33044	22x28	56	189,650
59		2-8-0	1908	33045	22x28	56	189,650
60		2-8-0	1908	33046	22x28	56	189,650
61		2-8-0	1908	33041	22x28	56	189,650
62		2-8-0	1908	33042	22x28	56	189,650
63		2-8-0	1908	33052	22x28	56	189,650
64		2-8-0	1908	33064	22x28	56	189,650
65		2-8-0	1908	33065	22x28	56	189,650
66		2-8-0	1908	33071	22x28	56	189,650
67		2-8-0	1908	33072	22x28	56	189,650
68		2-8-0	1908	33073	22x28	56	189,650
69		2-8-0	1908	33074	22x28	56	189,650
70		2-8-2	1916	43062	25x30	56	285,400
71		2-8-2	1916	43063	25x30	56	285,400
72		2-8-2	1916	43079	25x30	56	285,400
73		2-8-2	1916	43080	25x30	56	285,400
80	U.S.R.A.	2-8-2	1918	49616	26x30	63	292,000
81	U.S.R.A.	2-8-2	1918	49617	26x30	63	292,000
82	U.S.R.A.	2-8-2	1918	49618	26x30	63	292,000
83	U.S.R.A.	2-8-2	1918	49678	26x30	63	292,000
90		2-8-0	1925	58454	27x32	61	309,700
91		2-8-0	1925	58455	27x32	61	309,700
92		2-8-0	1925	58456	27x32	61	309,700
93		2-8-0	1925	58457	27x32	61	309,700
94		2-8-0	1925	58479	27x32	61	309,700
95		2-8-0	1925	58480	27x32	61	309,700
43	(formerly 2nd 10)	4-8-2	1944	70183	28x31	73	538,000
44	(formerly 2nd 11)	4-8-2	1944	70184	28x31	73	538,000
45	(formerly 2nd 12)	4-8-2	1944	70185	28x31	73	538,000

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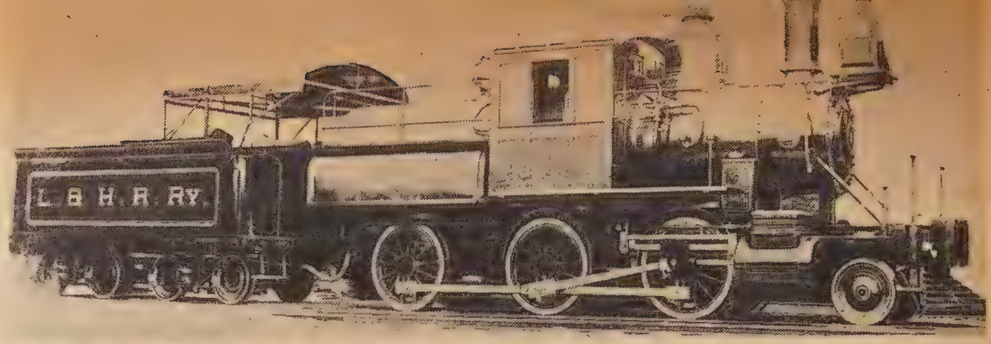
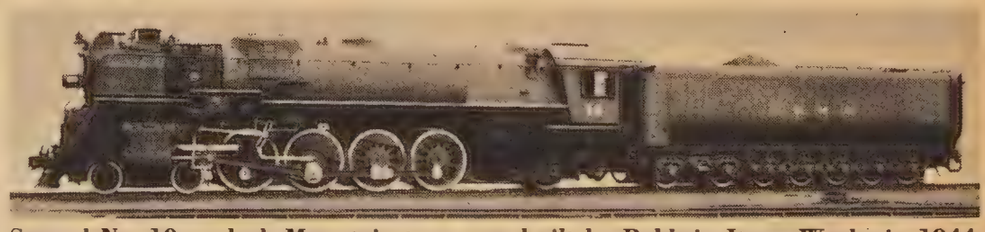


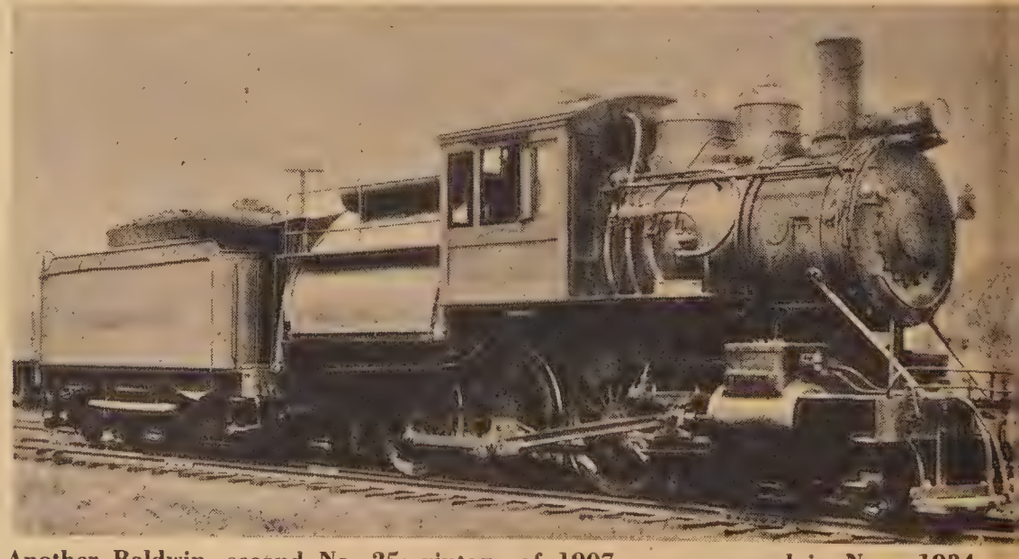
L&HR's first No. 9, *John Rutherfurd*, was built by Baldwin in '86, sold in 1902.
Collection of the late Joseph Lavelle

Baldwin built second 23, sturdy Camelback ten-wheeler, at Philadelphia in 1907.

Baldwin Camelback, second 23, was built in 1907 and sold second-hand in 1922.



Second No. 10, a sleek Mountain type, was built by Baldwin Loco. Works in 1944.



Another Baldwin, second No. 25, vintage of 1907, was scrapped in Nov., 1934.
Donald W. Furler

No. 902 is set out in Atlanta to wheel fast freight for the Central of Georgia.
Shelby Lowe, Rail Photo Service, 93 Massachusetts Ave., Boston, Mass.

CENTRAL of GEORGIA

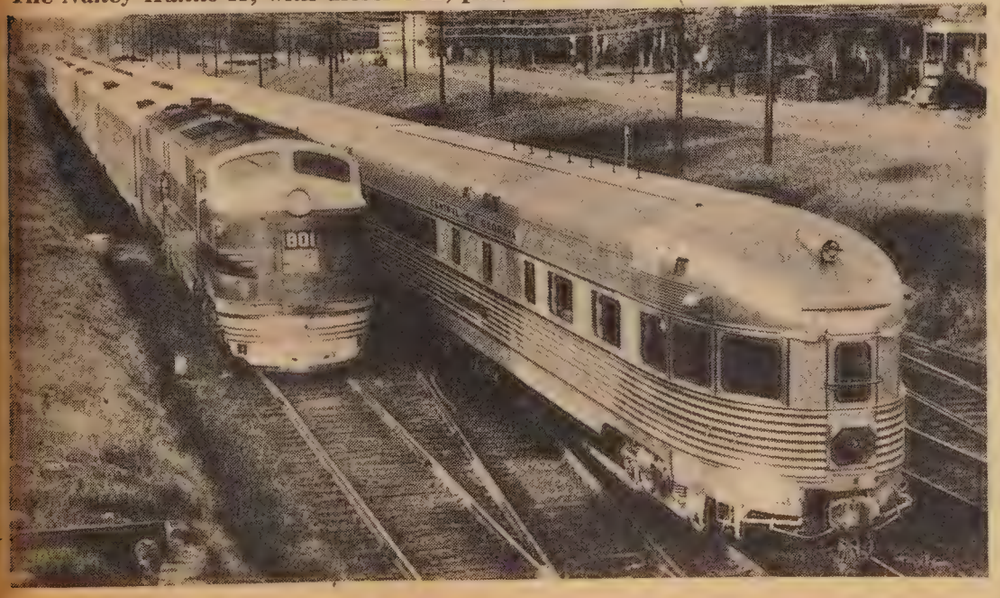
Roster Compiled by Sy Reich

Class	Rd. Nos.	HP	Builder	Bld. Mdl.	Whl. Argt.	Tr. Ef.	Weight	Date	Notes
DF-1	901-904	1500	GM-EMD	F3A	B-B	57,500	230,000	1947	
DF-1	905-909	1500	GM-EMD	F3A	B-B	57-500	230,000	1948	
DF-2	101-105	1500	FM	ALT 200.2A	B-B	61,695	246,780	1949	
DF-2	106-107	1500	GM-EMD	GP-7	B-B	61,750	247,000	1950	
DF-2	108-119	1600	Alco-GE	RS-3	B-B	62,250	249,000	1950-'51	
DF-2	120-123	1500	GM-EMD	GP-7	B-B	63,438	253,750	1951	s
DF-2	124-132	1500	GM-EMD	GP-7	B-B	61,750	246,250	1951	
DF-2	133-146	1600	Alco-GE	RS-3	B-B	62,472	249,890	1952	
DF-2	147-150	1600	Alco-GE	RS-3	B-B	63,752	255,010	1952-'53	s
DF-2	151-159	1600	Alco-GE	RS-3	B-B	62,472	249,890	1953	
DF-2	160-165	1750	GM-EMD	GP-9A	B-B	61,350	245,400	1956	
DF-2	166-170	1750	GM-EMD	GP-9A	B-B	61,590	246,320	1957	
DF-3	201	1500	GM-EMD	SD-7	C-C	92,100	368,400	1953	
DF-3	202-207	1750	GM-EMD	SD-9	C-C	92,100	368,400	1955	
DP-1	801-810	2000	GM-EMD	E-7A	AIA-AIA	53,553	318,000	1946-'48	s
DP-1	811-812	2250	GM-EMD	E-8A	AIA-AIA	54,257	322,000	1950	s
DS-1	1-3	600	GM-EMD	SW-1	B-B	50,000	199,400	1939,'41	(1)
DS-1	4	660	Alco-GE	SI	B-B	50,000	199,500	1940	
DS-1	5	660	Baldwin	VO	B-B	53,150	212,600	1940	
DS-1	6	660	Alco-GE	SI	B-B	50,000	198,000	1941	
DS-1	7	600	GM-EMD	SW-1	B-B	50,000	199,220	1941	
DS-2	20	1000	GM-EMD	NW-2	B-B	62,000	247,900	1941	
DS-2	21,23,24 28-35	1000	Alco-GE	S2	B-B	57,500	230,000	1940,'41 1944-'46	
DS-2	22	1000	Baldwin	VO	B-B	58,000	232,000	1940	
DS-2	25	1000	GM-EMD	NW-2	B-B	62,000	247,500	1942	
DS-2	26,27	1000	Baldwin	VO	B-B	60,000	240,000	1943,'44	
DS-2	36,37	1000	BW	DS 4-4-1000	B-B	57,725	230,900	1949	
DS-3	301-310	1200	GM-EMD	SW-9	B-B	61,956	247,824	1952-'53	
DS-3	311-314	1200	BLHW	S-12	B-B	60,000	240,000	1953	
DS-3	315-318	1200	FM	H12-44	B-B	62,075	248,300	1953	

Notes and Abbreviations

Roster compiled from data supplied by Supt. of Motive Power and Equipment, Central of Georgia Ry., and is accurate as of Nov. 25, 1957. Abbreviations: Bldr. Mdl., builder's model; Whl. Argt., wheel arrangement; GM-EMD, Electro-Motive Div., General Motors Corp.; Alco-GE, American Locomotive Co.; BW, Baldwin-Westinghouse; BLHW, Baldwin-Lima-Hamilton-Westinghouse; s, equipped with steam heat generator; (1) locomotive sold in 1957 to Atlanta, Stone Mt. & Lithonia Railroad. ●

The *Nancy Hanks II*, with diesel 801, passes *Man o' War* on C. of Ga. (July, '47).



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No. 1462, one of the last two 4-4-2's operated by Santa Fe on the West Coast, hauled freight as recently as the spring of 1949. Baldwin built her in 1909.
Photographed Nov. '48 by Stan Kistler (see page 66)

Potomac Electric Power Co. has three 0-4-0 "fireless cookers," all built by Davenport Locomotive Works. No. 3 serves Benning Road plant, Washington, D. C.
Neal Hall, Silver Springs, Md.

Coronado Railroad of Arizona, operated by American Copper Co., had gage of only 20 inches. Porter built engine No. 9 (0-4-4T) in 1898.
L. J. Ciaponni, 1514 90th Ave., Oakland, Calif.

RAILROAD HOBBY CLUB

by Sy Reich

CORRECTING a statement (Aug. issue) that came from Burdell Bulgrin, son of a Duluth, Missabe & Iron Range hogger, and other fans, that "DM&IR does not take kindly to railfans," H. A. Anderson, Executive Assistant to the President of the road, writes: "This statement is untrue. Each year we answer hundreds of requests for detailed information, pictures, folders, etc., from railfans and model-builders, and last July 5th we operated a railfan special train for inspection of yard and shop facilities. But because of safety hazards involved we prefer to have arrangements made in advance for visitors to our property."

Sy Reich

Harry Bedwell's standard railroad watch, a beautiful Elgin with 23 jewels that keeps perfect time, will be sold by his widow, Lorraine, to the highest bidder. Harry used this watch in putting out train orders and OS'ing trains. What do you think it is worth? Mail offers to Mrs. Harry Bedwell, 3029 Leeward Ave., Los Angeles 5, Calif.

The recent death of Robert R. Brown, Canada's top authority on railroad lore, is a loss to us all. Charles E. Fisher, president of the Railway & Locomotive Historical Society, has appointed his son, Douglas Brown, 711 42nd Ave., Lachine, Que., Canada, to succeed him as the official Canadian representative of the Society.

Miniature Railroad Club of York, Pa. (381 Wheatfield St.) will hold its 14th annual show on four week-ends from Nov. 29 to Dec. 21. Admission free. Sat. 7 p.m. to 10 p.m.; Sun. 2 p.m. to 10 p.m.

Illustrated special issues of the *Pacific Railway Journal*, 2304 Melville Drive, San Marino, Calif, are available as long as the supply lasts: Vol. 2, No. 6: Milwaukee Road development, operation, with emphasis on steam and electric locos, $2; Vol. 2, No. 5: Angel's Flight Ry., unique cable streetcar line in Los Angeles, $1; Vol. 2, No. 4: The Santa Fe's Fallbrook Branch; a flood turned a busy main line into a branch, 50c.

The following corrections to the Southern Pacific roster recently printed in *Railroad Magazine* are offered by Joe Strapac: 2850 built by SP, 4415 built 12/36, 1426-1441 weight 229,250, DF-500 weight 282,100, T&NO 2 renumbered PE 1646, 3/54, PE 1647 has C wheel arrangement.

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seeing bus. Contact John Little, 3534 Woodbine St., Chevy Chase 15, Md.

Frank C. Harmon, 4708 N. 38th St., Omaha, Neb., a Union Pacific machinist 44 years, has scrapbooks filled with photos of steam locomotives he worked on years ago, also shops, roundhouses, etc. He wants to hear from oldtimers who worked in the Omaha shops since 1913.

While H. L. Kelso was assembling data for an article on the Hudson-type locomotive that he is now writing for *Railroad Magazine*, the National Railway Historical Society was compiling a chart of specifications for that type on 17 roads. The chart has since been printed, 8x15 inches; it sells for 25 cents. Write James Myers, Sec. of NRHS, 5005 N. Sydenham St., Philadelphia, Pa.

Fine colored etchings of two early locomotives, the *Empire State* and the *Gov. Williamson*, each 14x22 inches, souvenirs of the fast-dying Steam Age suitable for framing, are offered at $1.95 apiece, both $3.75, postpaid, by Visual Discoveries, 4 W. 40th St., New York 18, N. Y.

Oct. 12—Bay Area Elec. RR. Ass'n sponsors trip, Marysville-Yuba City. Contact Addison Laflin, 2119 Marin Ave., Berkeley 7, Calif.

Lehigh Valley Chapter of NRHS is preparing a history of all rail-buses, gas-electric cars, and locomotives built by Mack Trucks or International Motors at their Allentown or Plainfield plants. Who can supply data or pix of these units as used since 1921 on various railroads in U.S., Canada, and Cubs? Write Randolph L. Kulp, editor of the Society's publications, 602 St. John Street, Allentown, Pa.

Oct. 26—Calif.-Nev. RR. Hist. Soc. sponsors SP steam trip to Shasta Dam. Contact Arthur Lloyd, Jr., 974 Pleasant Hill Rd., Redwood City, Calif.

Fare-Ways, a ready reference travel book compiled by A. E. Bemberg, retired Chicago & Eastern Illinois official,

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STEAM POWER

THERE are still many steam locomotives running in the United States, not to mention Canada, but their number dwindles daily. We list a few of those you can still photograph: Our information comes from Peter Boehm, Don Sease, O. L. Sabetto, D. W. Kelley, Edward Emery, John A. Krave, James E. Staggs, and Mel Beantonor.

Flagstaff, Ariz: Southwest Lumber Mills—2-8-0, 2—2-6-0.
Douglas, Ariz.: SP 2-8-0's 3400-3406, 3423.
Detroit, Mich.: GTW—4-8-4, 4-8-2, 4-6-2, 2-8-2.
Toronto, Ont.: CPR—4-6-0, 2-8-0, 4-6-2, 4-6-4, 2-8-2.
Toledo, Ore.: Georgia Pacific—2-8-2's.
Santa Maria Fair Grounds: Santa Maria Valley in Calif., 2-6-2 preserved.

Warren Crater (CNJ engineer), 270 W. Colfax Ave., Roselle Park, N.J., has written an accurate and interesting book, *Locomotives of the Jersey Central,* their history and development, 1839 to date, 83 pages, 84 illustrations, with complete all-time rosters, renumbering, and rebuilding. It sells at $2.50 a copy as long as the supply lasts. After that it will be a collectors' item.

Baltimore & Ohio Transportation Museum at Baltimore, Md., which houses some famous old locomotives, cars, etc., has been closed since May 31 as an economy move. Officials say it cost them $20,000 a year to keep open. Its future hinges on a pickup in railroad revenue.

Plans for the new National Railroad Museum to be built at Green Bay, Wis., have passed the blueprint stage, and construction will soon start on a $360,000 structure. Meanwhile, the museum is interested in negotiating with owners of antique engines, cars and other equipment suitable for exhibition. The city of Green Bay, has donated a 22-acre site and about one-third of the cost. The Milwaukee Road has given a steam locomotive.

Another ambitious goal (still in the embryonic stage) is being planned for Portland, Ore. The city offers to donate land in the Sellwood-Oaks area to be used in building a shrine and museum for the proposed National Railroad Hall of Fame, reports the originator of this idea, Jeff Keenan (see page 6). The "Hall" currently maintains a Coach of Fame on its own tracks in Travel town, Los Angeles. Its directors have voted to honor Abraham Lincoln, Col. John Stevens, Horatio Allen, and John Garrett, these being the first four in what is expected to become a long and impressive list.

Down at Hammond, La., local railfans have opened the Southeastern Railroad Museum with six narrow gage engines, several cars, standard-gage power including a Shay and a Heisler, other items. "Most of us had narrow-gage lines of our own," writes C. W. Witbeck, Box 790, Hammond, "and one fellow had a little standard-gage road, so we pooled our resources and set up a public display."

The High Ballers Railroad Club, organized last year in Vancouver, B. C., Canada, to promote railroading and to preserve steam locomotives, is seeking help to start a railroad museum in the area. "We need $5,000 to buy a Northern Pacific 4-6-0, No. 1372, pay duty on her, ship her to Vancouver, and repair her for use on future fan trips," writes Roger Burrows, Sec.-Treas., 19 E. 47th St., Vancouver. He does not say which tracks would be used for fan trips.

Next Issue — February (out Dec.2)

MANY READERS enjoy our steam-power covers. For February, Herb Mott has painted the Southern Pacific's narrow-gage Keeler-Laws branch in glowing colors, suitable for framing, and we'll back it up with an illustrated feature on that famous old line.

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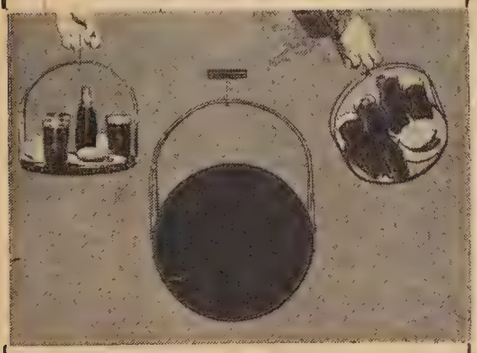

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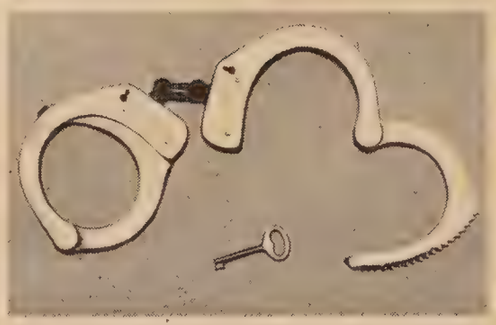


Once they're locked only the key will open these hard steel handcuffs. Type preferred by sheriffs, detectives, etc. Tamper-proof lock. Polished nickel surface. Professional belt carrying case comes free with each pair. $1 deposit with C.O.D. orders. Handcuffs come for $9.50 ppd. Order from Big Three Enterprises, Dept. 17, 1109 Sixth Ave., N. Y.

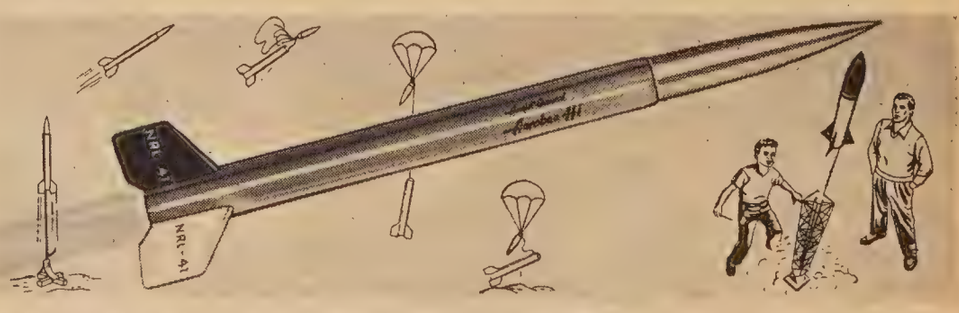
It's a skeleton model of the mighty Tyrannosaurus Rex! A reproduction in scale of the King of Dinosaurs who stood 50 feet long and 20 feet high. The bones are plastic and unbreakable. Almost 2 feet long. You and the kids will get a kick out of this boy. Educational, too. Skeleton comes for $1.25 ppd. Museum Prods., Dept. EAR, 228 Lexington, N.Y. 16.

Pamper your changeable, little woman by giving her this hand embossed leather bag. It's reversible! She can carry it with a different color, design to match her mood. Edges hand laced. Colors: natural & brown, brown & red, brown & green. Size 7"x12"x3", $25; 6"x9"x2½", $20 ppd. Shoes available. McLean Mexico Shopper, Dept. A, 512 N. Main, McAllen, Texas.

Sleek imported scale models of Mercedes-Benz (top) and Ferrari racers are only 4" long, yet go 20 mph on a straightaway. Beautifully detailed, cars have micro-sensitive adjustment and differential for precision steering, brake, free-wheeling, crash absorber, etc. Nice for $2.95 ppd. each. Prince Enterprises, 60-H East 42nd St., N. Y. 17.

Stamps—500 of 'em—are yours for $1 ppd., a good price for a collection that contains the Monaco Grace Kelly wedding stamp, four Roosevelt Memorial stamps from four countries, the only triangle stamp ever issued by the U. S., and others. With literature and stamps on approval. Globus Co., Dept. 545, 268 4th Ave., New York City, N. Y.

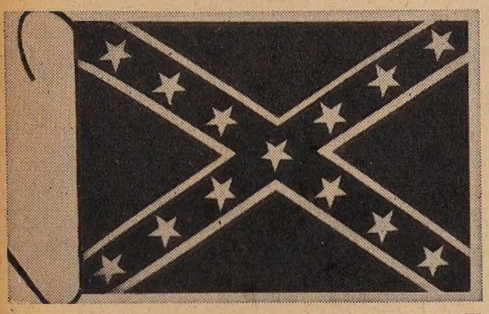
This model of "45" calibre automatic comes disassembled. Over 15 moving parts. Fires 8 rounds of pellets in mag. clip which snaps into hard butt. Automatic slide action. Easy to assemble. Comes with instructions, supply of pellets and silhouette target for $1.98 plus 25¢ shipping charge. Bargain Gun, Pistol Dept. A M, 1 Park Ave., New York, N. Y.



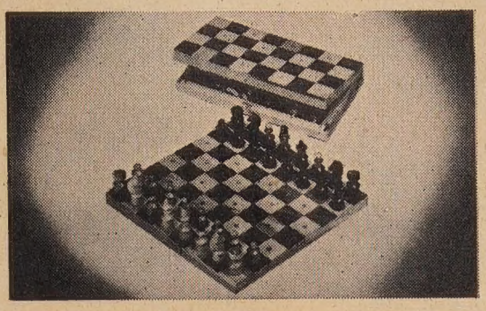
Working-model missile—4 years of research went into development of this 1/20th scale model of the Aerobee-Hi missile which will zoom up 1,000 feet (at 150-200 mph), eject a parachute, and lower itself safely to earth. It takes 5 minutes to repack parachute, install new motor, and missile is ready for flight again. Solid fuel rocket (pound of thrust every 2 seconds), guaranteed absolutely safe. Missile and engine have been tested at White Sands Proving Ground. Featured in Mechanix Illustrated Magazine. The answer to safe model rocketry. Assembled, missile measures 14". With 6 rocket motors, $9.95 ppd., and worth it. Chabon Scientific Co., 411-A D Lincoln Building, New York 17, N. Y.

SHOP BY MAIL

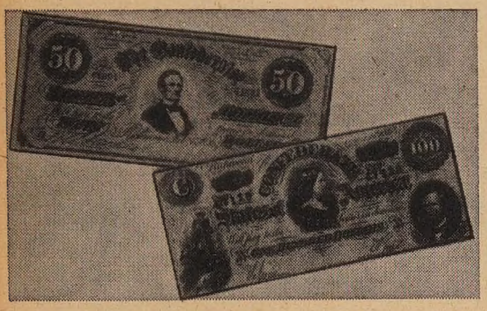
All products shown here may be obtained directly from indicated sources. Send check or money order with your order. Manufacturer will refund full purchase price on prompt return of unused, non-personalized items. This department is not composed of paid advertising.



If there's chivalry in your bones, suh, you'll be moved that the Stars and Bars still flies—mostly from car aerials. No explaining it, but you see the Confederate flag more and more. Red, white & blue 12" x 18" cotton, $1. Authentic bunting cavalry battle flag, 32" x 32", $7.95 ppd. Banner Supply House, 49 East 41st, N. Y. 17.

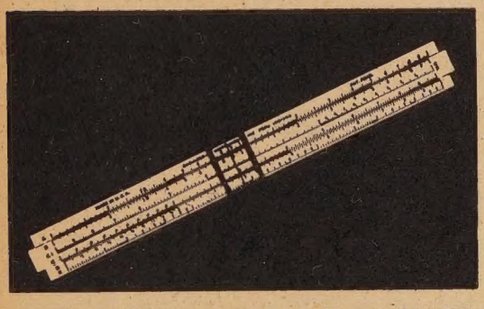


Here is the answer to every avid chess player's dream! It's a portable chess set small enough to take wherever you go. Beautifully made of fruitwood. Measures 7" square opened and closed it is 3½" x 7". Perfect for commuters, vacationers—for anyone anytime. Comes for $3.98 ppd. Order from Gayle's, 440 West 24th, New York 11, N. Y.

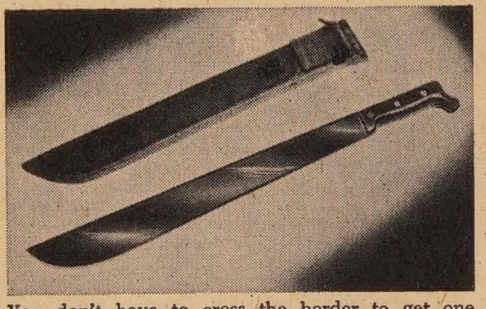


You'll have lots of fun with these Authentic Reproductions of Confederate Money. You can do anything with these bills but spend them. A million (63 bills in all made up of 9 each of 10s, 20s, 50s, 100s, 1000s, 10,000s, 100,000s), $2.98 ppd; $4 million, $10 ppd. Send your order to Best Values, Dept. M-398, 403 Market, Newark, N. J.

The Roustabout is just about the best lookin' in bootwear. Smooth side out, pliable nine inch top. Comes in cool desert tan color. Cushion foot construction, with built-in-arch support for easy comfortable wear. Neo-cord sole and heel. Sizes: 5 to 13 with C-D-E width. For $15.95 ppd. Bill's Military Stores, Dept. DR, Green Cove Springs, Fla.



If you can use a pencil, you can use this slide rule which calculates instantly and accurately. Works efficiently with problems in multiplication, equations, division and roots, etc. High vision clear-view slide rule. 10" long. A, B, C, D, C1 and K scales. $1 ppd. from Larch, 118 E. 28th St., Dept. 58-PF, New York 16.



You don't have to cross the border to get one of these 18" blade machetes. War surplus (Army made 'em for use in tropics), you can bush out a trail, clear a camp site, or fell a good-size tree with one of 'em. In sturdy green canvas shield with belt clip. $2.95 ppd. Arms & Weapons, Dept. A-3, 40 East 40th St., New York 16, N. Y.

You and the kids will have fun with these 7 giant dinosaurs. These pre-historic monsters are up to four feet tall. All with toss-up feet action. These inflatable toys with fascinating names such as Plateosaurus, Sea Serpent, Trachodon, etc., will thrill the little ones. Set of 7 comes for $1.25 ppd. Giant Dinosaurs, Dept. H-48, 114 E. 32, New York.

You'll look and feel great by keeping in shape with Home Gym. By spending 10 minutes a day you'll be able to add to and tone up those muscles! Develop that chest, strengthen back and legs, etc. Easy method. Complete instructions with Home Gym for $2.98 ppd. Deluxe model, $3.98. Home Gym., Dept. 337, 318 Market, St., Newark, N. J.

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"He Made Me Feel Like A Bride Again"

IT'S hard for me to believe that a few weeks ago I actually thought about leaving my husband! He had become so nervous and irritable — so cross with the children and me that there was just no living with him. He was always "too tired" to do anything — too run-down to have fun with his family. Even our children were puzzled and hurt by his week-in, week-out grumpiness. Frankly we bickered and fought so much I thought our marriage was over.

When Jim finally went to our family doctor, the examination proved there was nothing really wrong. The doctor said Jim's condition was merely caused by an easily corrected *nutritional deficiency* in his diet. You can imagine how shocked *I* was to discover that even though Jim was well-fed, he was actually poorly *nourished* due to a lack of vitamins, minerals and lipotropic factors.

Just when things looked blackest, we learned about the famous Vitasafe Plan through an ad in our newspaper. It told how other people with Jim's condition had been helped by taking just one Vitasafe Capsule a day. Naturally, we sent for a trial month's supply. What a difference it has made! Vitasafe High-Potency Capsules have helped him snap back with increased vigor and vim. I'm so happy, I feel *like a bride* again! Perhaps someone in *your* family feels tired and run-down because of a nutritional deficiency. Why don't you take advantage *right now* of this sensational trial offer as we did?

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25¢ just to help cover shipping expenses of this

FREE 30 days supply High-Potency Capsules

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Safe nutritional formula containing 27 proven ingredients: Glutamic Acid, Choline, Inositol, Methionine, Citrus Bioflavonoid, 11 Vitamins plus 11 Minerals

To prove to you the remarkable advantages of the Vitasafe Plan . . . we will send you, without charge, a 30-day free supply of high-potency VITASAFE C.F. CAPSULES so you can discover for yourself how much stronger, happier and peppier you may feel after a few days' trial! Just one of these capsules each day supplies your body with over *twice* the minimum adult daily requirements of Vitamins A, C, and D . . . *five times* the minimum adult requirement of Vitamin B-1 and the *full concentration* recommended by the Food and Nutrition Board of the National Research Council for the other four important vitamins! Each capsule contains the amazing Vitamin B-12 — one of the most remarkable nutrients science has yet discovered—a vitamin that actually helps strengthen your blood and nourish your body-organs.

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WHY YOU MAY NEED THESE SAFE HIGH-POTENCY CAPSULES

As your own doctor will tell you, scientists have discovered that not only is a daily minimum of vitamins and minerals, in one form or another, absolutely indispensable for proper health . . . but some people actually need *more* than the average daily requirements established by the Food and Nutrition Board of the National Research Council. If you tire easily . . . if you work under pressure, subject to the stress of travel, worry and other strains . . . then you may be one of the people who needs this extra supply of vitamins. In that case, VITASAFE C.F. CAPSULES may be "just what the doctor ordered" —because they contain *the most frequently recommended food supplement formula for people in this category!*

POTENCY AND PURITY GUARANTEED

There is no mystery to vitamin potency. As you probably know, the U.S. Government strictly controls each vitamin manufacturer and requires the exact quantity of each vitamin and mineral to be clearly stated on the label. This means that the purity of each ingredient, and the sanitary conditions of manufacture are carefully controlled for your protection! When you use VITASAFE C.F. CAPSULES you can be sure you're getting exactly what the label states . . . *pure* ingredients whose beneficial effects have been proven time and again!

WHY WE WANT YOU TO TRY A 30-DAY SUPPLY — FREE!

We offer you this 30-day free trial of valuable VITASAFE C.F. CAPSULES for just one reason. So many persons have already tried them with such astounding results . . . so many people have written in telling us how much better they felt after only a short trial . . . that we are absolutely convinced that you, too, may experience the same feeling of improved well-being after a similar trial. In fact, we're so convinced that we're willing to back up our convictions with our own money. *You* don't spend a penny for the vitamins! A month's supply of similar vitamin capsules, if it were available at retail, would ordinarily cost $5.00.

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SPECIAL FORMULA FOR WOMEN

Women may also suffer from lack of pep, energy and vitality due to nutritional deficiency. If there is such a lady in your house, you will do her a favor by bringing this announcement to her attention. Just have her check the "Woman's Formula" box in the coupon.

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Yes, I accept your generous no-risk offer under the Vitasafe Plan as advertised in Adventure Men's Group.

Send me my FREE 30-day supply of high-potency Vitasafe Capsules as checked below:

☐ Man's Formula ☐ Woman's Formula

I ENCLOSE 25¢ PER PACKAGE for packing and postage.

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This offer is limited to those who have never before taken advantage of this generous trial. Only one trial supply per person.

IN CANADA: 394 Symington Ave., Toronto 9, Ont.
(Canadian Formula adjusted to local conditions.)

Mail Coupon To **VITASAFE CORPORATION,**
43 West 61st Street, New York 23, N. Y.
or when in New York visit the VITASAFE PHARMACY, 1860 Broadway at Columbus Circle
IN CANADA: 394 Symington Ave., Toronto 9, Ontario

EACH DAILY VITASAFE CAPSULE FOR MEN CONTAINS

Choline Bitartrate	31.4 mg.	Vitamin C	75 mg.	Phosphorus	58 mg.
Inositol	15 mg.	Vitamin B_1	5 mg.	Iron	30 mg.
dl-Methionine	10 mg.	Vitamin B_2	2.5 mg.	Cobalt	0.04 mg.
Glutamic Acid	50 mg.	Vitamin B_6	0.5 mg.	Copper	0.45 mg.
Lemon Bioflavonoid Complex	5 mg.	Vitamin B_{12}	2 mcg.	Manganese	0.5 mg.
Vitamin A	12,500 USP Units	Niacin Amide	40 mg.	Molybdenum	0.1 mg.
Vitamin D	1,000 USP Units	Calcium Pantothenate	4 mg.	Iodine	0.075 mg.
		Vitamin E	2 I.U.	Potassium	2 mg.
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		Calcium	75 mg.	Magnesium	3 mg.

Compare the richness of this formula with any other vitamin and mineral preparation.

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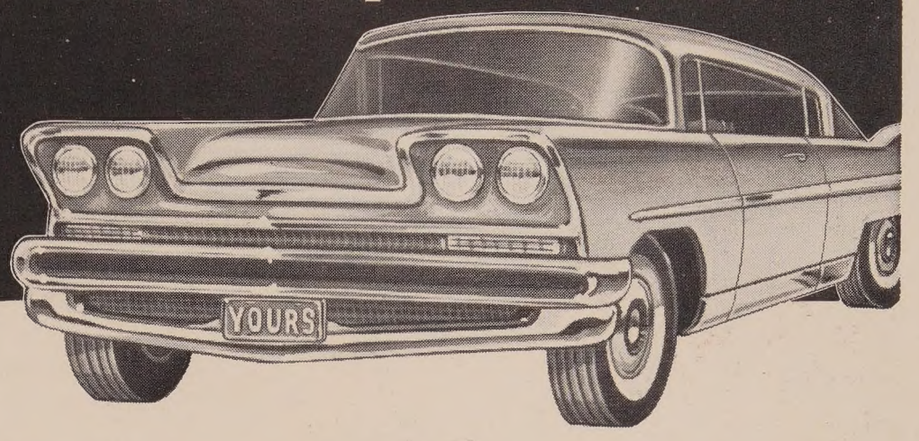

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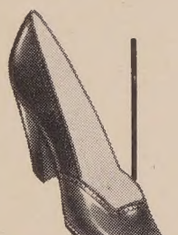

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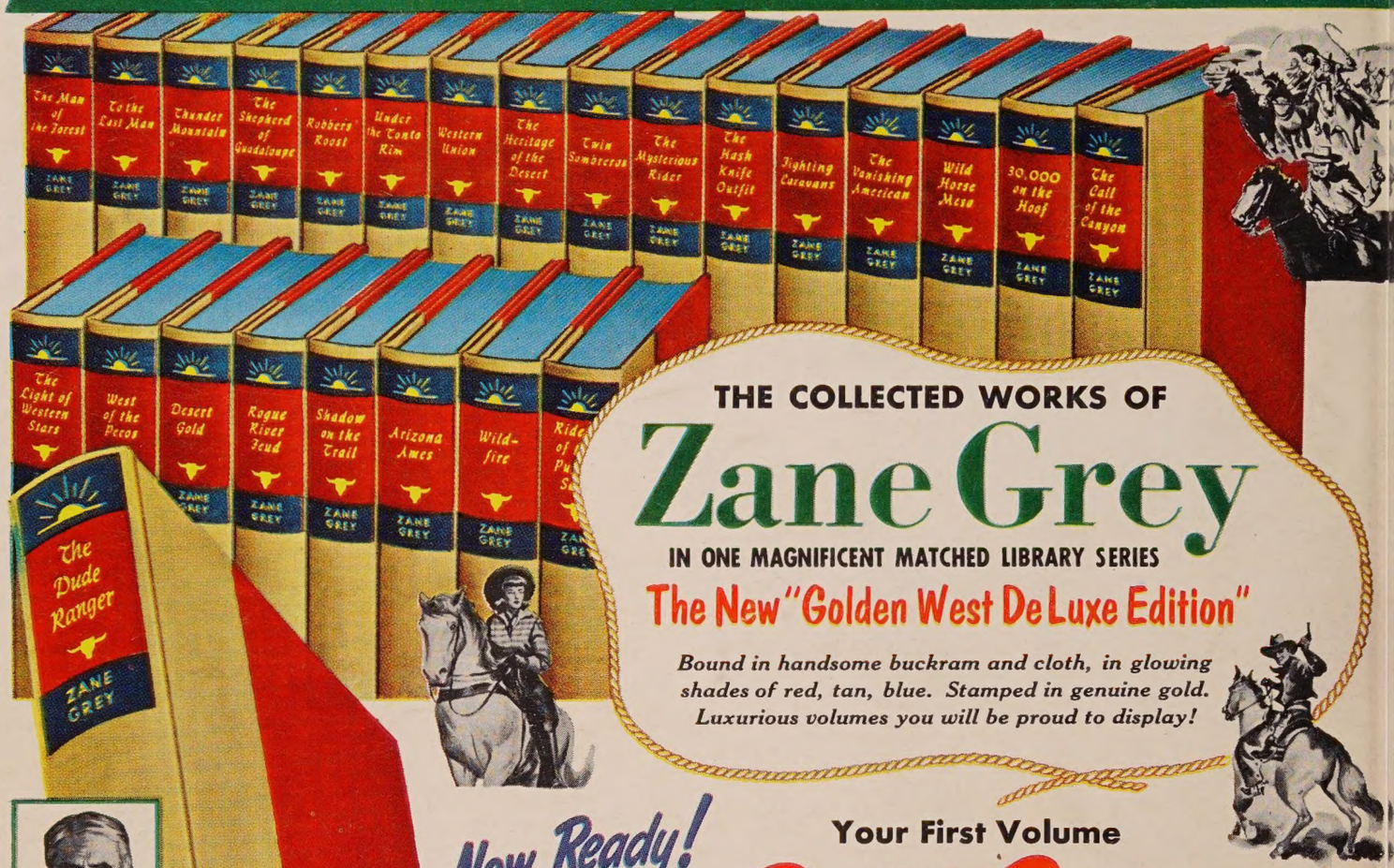

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